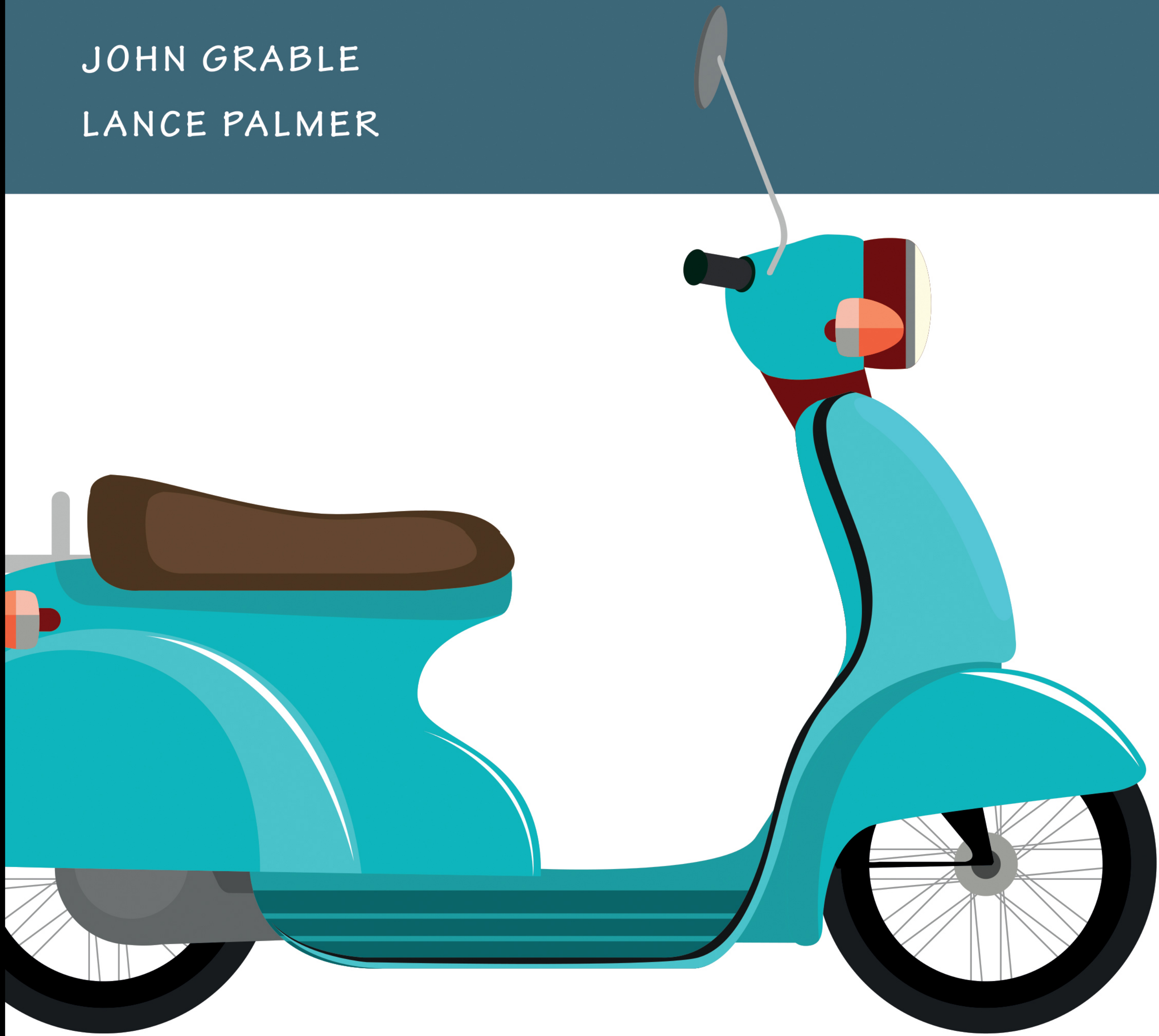
INTRODUCTION TO PERSONAL FINANCE

BEGINNING YOUR FINANCIAL JOURNEY

JOHN GRABLE

LANCE PALMER



WILEY

Introduction to Personal Finance

Beginning Your Financial Journey

First Edition

JOHN E. GRABLE PhD, CFP®

University of Georgia
Athens, Georgia

LANCE PALMER PhD, CPA, CFP®

University of Georgia
Athens, Georgia

WILEY

DEDICATED TO

Our wives, Emily and Annie,
for their love, support, and encouragement.

DIRECTOR AND VICE PRESIDENT	Michael McDonald
SENIOR ACQUISITIONS EDITOR	Emily Marcoux
LEAD PRODUCT DESIGNER	Ed Brislin
SENIOR PRODUCT DESIGNER	Jenny Welter
MARKETING MANAGER	Jenny Geiler
EDITORIAL SUPERVISOR	Terry Ann Tatro
EDITORIAL ASSISTANT	Kirsten Loose
SENIOR CONTENT MANAGER	Dorothy Sinclair
SENIOR PRODUCTION EDITOR	Elena Saccaro
SENIOR DESIGNER	Wendy Lai
COVER IMAGE	© BlueRingMedia/Shutterstock

This book was set in Source Sans Pro by Aptara®, Inc. and printed and bound by Quad Graphics/Versailles. The cover was printed by Quad Graphics/Versailles.

Founded in 1807, John Wiley & Sons, Inc. has been a valued source of knowledge and understanding for more than 200 years, helping people around the world meet their needs and fulfill their aspirations. Our company is built on a foundation of principles that include responsibility to the communities we serve and where we live and work. In 2008, we launched a Corporate Citizenship Initiative, a global effort to address the environmental, social, economic, and ethical challenges we face in our business. Among the issues we are addressing are carbon impact, paper specifications and procurement, ethical conduct within our business and among our vendors, and community and charitable support. For more information, please visit our website: www.wiley.com/go/citizenship.

ISBN-13: 978-1-119-54739-6

The inside back cover will contain printing identification and country of origin if omitted from this page. In addition, if the ISBN on the back cover differs from the ISBN on this page, the one on the back cover is correct.

Printed in America.

10 9 8 7 6 5 4 3 2 1

Brief Contents

From the Authors

You have probably heard the phrase “Life is a journey.” This statement is particularly true when it comes to your financial life. Our goal in writing this text is so that everyone may be able to realize the life journey they envision for themselves without the constant distraction of financial stresses. Throughout this text, we refer to your lifetime financial journey as your interaction with and management of household financial resources across time. What does this mean? The concept is very simple. Take a moment and visualize yourself in 10, 20, or 30 years’ time. What will you be doing, where will you be living, and maybe most important of all, will your financial journey be supporting your greater life journey? Of course, no one knows for certain what the future holds, but life’s financial journey is often easier if you can visualize what your future self may be doing.

> “This text was written to help you launch your financial journey or, for those already working and earning and spending money, create a clear financial roadmap that will help you realize not only your financial goals but also your life goals and dreams.”

Imagine that instead of a lifetime vision, we asked you to tell us about a dream vacation. We want you to be specific. Where would you like to go? At what time of year do you see yourself embarking? Will you be driving, taking a train, riding a bus, cruising on a boat, flying, hiking, or maybe all of these? For how long do you see yourself staying on vacation? What will you be doing? And, of course, how much will this dream vacation cost? Once you have this information mapped out, you can begin to prepare for your vacation. Well, the same thing is true when it comes to your lifetime financial journey. Clearly, lifetime dreams and finances are more complicated than one vacation, but the basic idea of thinking about where you want to be, what you want to be doing, and determining a cost for your needs and wants is the same. As your vision for your life evolves, you will learn to prepare and adapt your finances to support your dreams and goals.

This text was written to help you launch your financial journey or, for those already working and earning and spending money, create a clear financial roadmap that will help you realize not only your financial goals but also your life goals and dreams. You will be learning about a variety of topics, including how to increase your income, lower household expenses and debts, manage taxes, navigate the insurance marketplace, invest wisely, and prepare for retirement and later life.

Some of the material you will be reading about will be new to you. Some concepts may challenge your current thinking. Both possibilities are by design. Our hope is that you will like reading this text and find the material helpful, and maybe even inspiring enough to move into the fast lane of your lifetime financial journey.

John Grable
Lance Palmer

About the Authors

Cal Powell, UGA College of Family and Consumer Sciences

John Grable

John Grable teaches and conducts research in the Certified Financial Planner® Board of Standards Inc. undergraduate and graduate programs at the University of Georgia where he holds an Athletic Association Endowed Professorship. Prior to entering the academic profession, he worked as a pension/benefits administrator and later as a Registered Investment Adviser in an asset management firm. Dr. Grable has served the financial planning profession as the founding editor of the *Journal of Personal Finance* and co-founding editor of the *Journal of Financial Therapy* and *Financial Planning Review*. He is best known for his work in the areas of financial literacy and education, financial risk-tolerance assessment, behavioral financial planning, and evidence-based financial planning. He has been the recipient of numerous research and publication awards and grants, and is active in promoting the link between research and financial planning practice where he has published over 150 refereed papers, co-authored several textbooks, co-authored a financial planning communication book, and co-edited a financial planning and counseling scales book. Since earning his doctorate degree, Dr. Grable has served on the Board of Directors of the International Association of Registered Financial Consultants (IARFC), as Treasurer and President for the American Council on Consumer Interests (ACCI), and as Treasurer and board member for the Financial Therapy Association. He has received numerous awards, including the prestigious Cato Award for Distinguished Journalism in the Field of Financial Services, the IARFC Founders Award, the Dawley-Scholer Award for Faculty Excellence in Student Development, and the ACCI Mid-Career Award. He currently writes an economics and investing column for the *Journal of Financial Service Professionals* and provides research and consulting services through the Financial Planning Performance Lab.

Cal Powell, UGA College of Family and Consumer Sciences

Lance Palmer

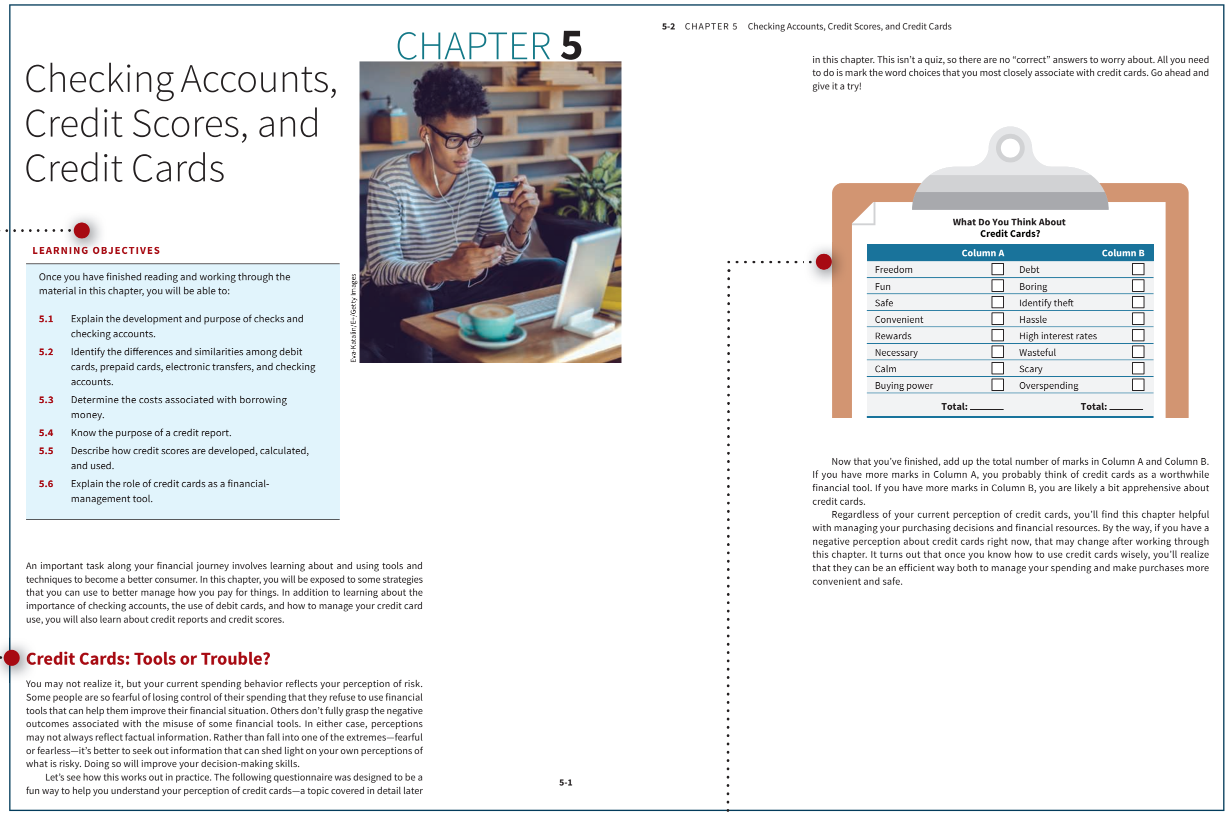
Lance Palmer received his bachelor's and MBA degrees from The University of Utah and his doctorate degree from Utah State University. He is a co-founder of the University of Georgia (UGA) Financial Planning major where he continues to teach courses in financial planning with a focus on tax planning. He is a Certified Financial Planner® professional. He has served on multiple editorial boards and as President of the Academy of Financial Services. He was selected as a 2007 Lilly Teaching Fellow, he is a recipient of the 2010 Richard B. Russell Excellence in Undergraduate Teaching Award, and he received the 2013 Engaged Scholar Award. Working closely with Georgia United Credit Union, Dr. Palmer has helped to expand the service-learning Volunteer Income Tax Assistance program in Athens, Georgia. Under his supervision, students studying financial planning and accounting complete approximately 1,300 tax returns for families in the local community each year. His students also provide thousands of hours of financial education and planning assistance to tax filers during the tax preparation process. Dr. Palmer is also affiliated with the University of Georgia ASPIRE Clinic. Dr. Palmer's research has focused on motivating savings among low- and moderate-income tax filers through brief intervention strategies. His research has also explored how service-learning participation helps to prepare students for professional work.

Unique Pedagogical Framework

A unique aspect of *Introduction to Personal Finance* is its pedagogical framework. Rather than force students to wade through page after page of densely written material that must fit within a limited number of chapters, this text offers fewer chapters with more topics. The point of a topic-based text is to make financial literacy topics fun to learn, easy to read, and quick to digest. The pedagogical features in our text include the following:

Learning Objectives

Learning objectives identify the most important material for students to understand while reading the chapter. At the end of the chapter, the Learning Objectives Review section summarizes the chapter content in the context of the learning objectives.



CHAPTER 5

Checking Accounts, Credit Scores, and Credit Cards

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

5.1 Explain the development and purpose of checks and checking accounts.
5.2 Identify the differences and similarities among debit cards, prepaid cards, electronic transfers, and checking accounts.
5.3 Determine the costs associated with borrowing money.
5.4 Know the purpose of a credit report.
5.5 Describe how credit scores are developed, calculated, and used.
5.6 Explain the role of credit cards as a financial-management tool.

Eva-Katalin/E+/Getty Images

An important task along your financial journey involves learning about and using tools and techniques to become a better consumer. In this chapter, you will be exposed to some strategies that you can use to better manage how you pay for things. In addition to learning about the importance of checking accounts, the use of debit cards, and how to manage your credit card use, you will also learn about credit reports and credit scores.

Credit Cards: Tools or Trouble?

You may not realize it, but your current spending behavior reflects your perception of risk. Some people are so fearful of losing control of their spending that they refuse to use financial tools that can help them improve their financial situation. Others don't fully grasp the negative outcomes associated with the misuse of some financial tools. In either case, perceptions may not always reflect factual information. Rather than fall into one of the extremes—fearful or fearless—it's better to seek out information that can shed light on your own perceptions of what is risky. Doing so will improve your decision-making skills.

Let's see how this works out in practice. The following questionnaire was designed to be a fun way to help you understand your perception of credit cards—a topic covered in detail later

5-1

5-2 CHAPTER 5 Checking Accounts, Credit Scores, and Credit Cards

in this chapter. This isn't a quiz, so there are no "correct" answers to worry about. All you need to do is mark the word choices that you most closely associate with credit cards. Go ahead and give it a try!

What Do You Think About Credit Cards?

Column A		Column B	
Freedom	☐	Debt	☐
Fun	☐	Boring	☐
Safe	☐	Identify theft	☐
Convenient	☐	Hassle	☐
Rewards	☐	High interest rates	☐
Necessary	☐	Wasteful	☐
Calm	☐	Scary	☐
Buying power	☐	Overspending	☐
Total: ______		Total: ______	

Now that you've finished, add up the total number of marks in Column A and Column B. If you have more marks in Column A, you probably think of credit cards as a worthwhile financial tool. If you have more marks in Column B, you are likely a bit apprehensive about credit cards.

Regardless of your current perception of credit cards, you'll find this chapter helpful with managing your purchasing decisions and financial resources. By the way, if you have a negative perception about credit cards right now, that may change after working through this chapter. It turns out that once you know how to use credit cards wisely, you'll realize that they can be an efficient way both to manage your spending and make purchases more convenient and safe.

Chapter Opener Vignettes

Each chapter begins with a vignette that describes a personal application. The vignettes illustrate concepts that will be presented in the chapter and are meant to heighten student interest, motivate learning, and demonstrate the real-life relevance of the material in the chapter.

Chapter-Opening Questionnaires

Each chapter includes a quick and fun questionnaire, an immediate way to motivate and engage students. After completing the questionnaire, students will not only have a sense of their current knowledge of the chapter's topics but also how gaining more understanding will help them along their financial journey.

Concepts in Action

Your sister just graduated from college and wants to get a car loan. She would like to borrow $10,000 and repay it over 5 years. She has three offers:

1. Great Bank is offering her a no-fee 1.99% APR loan.
2. Best Bank is offering her an interest rate of 1.89% with $100 of loan fees (2.29% APR).
3. The car dealership is offering her a loan with an interest rate of 1.69% and only $125 in loan fees (2.19% APR).

What is your advice to your sister?

Solution

Compare the loans by reviewing the APR associated with each loan. The first loan has an interest rate and APR that are equal because there are no fees to finance the loan. The next two loans have fees to process the loan, which cause the APR to be higher than the interest rate because the APR incorporates these fees. Thus, even though the interest rate charged by Best Bank and the car dealership are lower than Great Bank's interest rate, Great Bank has the lowest APR when all of the fees are included and therefore is the lowest cost to borrow. Great Bank's total finance charge is $514.03, Best Bank's total finance charge is $592.69, and the car dealership's total finance charge is $565.93.

Concepts in Action

Along with a generous number of in-text examples, every topic includes a Concepts in Action box. These realistic mini-cases with detailed solutions help students better understand how to apply their analytical skills to deal with the many financial issues they will encounter in the real-world.

Illustrations

Incorporating innovative ways to engage students and help them learn key personal finance topics is a key component of our approach. Throughout the text, carefully crafted illustrations visually reinforce each topic's main concepts in a fun, engaging manner.

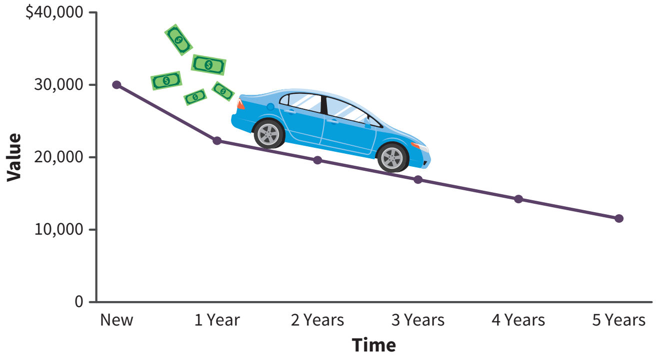


ILLUSTRATION 6.4.1

Average Depreciation for a $30,000 Vehicle

The **Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (CARD Act)** requires credit card lenders to inform borrowers on their monthly statement how much they should pay each month to have their credit card paid in full within 3 years. The CARD Act also requires credit card issuers to inform borrowers in their monthly statements how much interest the borrower will pay if they only make the minimum payments (see **Helpful Hint**).

HELPFUL HINT

Congress is trying to equip borrowers with good information, but as a borrower, you have to put that good information to use and make the decision to pay off your credit card as quickly as you can.

Types of Credit Cards

Like most consumer products and services, credit cards come in all sorts of packages. Although most people first think of MasterCard®, Visa®, and Discover®, it's important to remember that there are other types of credit cards.

- Hotels, gas companies, and airlines issue credit cards, most of which are co-branded with a company like Visa®.
- Some credit cards are really **travel and entertainment cards**, such as American Express® and Carte Blanche®, which typically require cardholders to pay off their balance on a monthly basis (although American Express issues both credit cards and travel and entertainment cards).
- If you plan to pay off your credit card balance each month, you may want to consider **reward credit cards**, which provide benefits linked to how much the card holder purchases with their card. These benefits can include cash back, airline and hotel travel points, and other valuable benefits. These types of credit cards generally have higher interest rates and fees, as illustrated in **Illustration 5.6.3** (see **Helpful Hint**).

HELPFUL HINT

If you plan to carry a monthly balance, reward credit cards may not be a good choice because of their higher interest rates and fees. However, if you don't carry a balance, reward cards may be just as affordable as regular credit cards.

Helpful Hints

Throughout the text, our approach is to present personal finance topics that are of the greatest value and benefit to the students. Helpful Hints offer specific guidance and suggestions for how to put that information into practice or where students might obtain additional assistance.

End-of-Topic Assessment

End-of-Topic Assessment ensures that students comprehend the material they just learned through Multiple-Choice, Short Answer, and Explore questions, as well as an Expanded Learning Activity. Much of this assessment material is identified as requiring calculation, writing, groupwork, and presentation skills.

End-of-Topic Assessment

Multiple-Choice Questions

1. A credit card requires you to:
   - **a.** make a fixed monthly payment until the loan is paid off.
   - **b.** make a minimum monthly payment based on the outstanding balance.
   - **c.** pay interest on all purchases.
   - **d.** obtain approval from the lender before making a purchase.
2. Which of the following statements is *true* regarding credit cards?
   - **a.** You may pay off a credit card balance at any time without penalty.
   - **b.** If you pay off a credit card balance early, you will pay a penalty APR.
   - **c.** You may not pay off a credit card balance unless you receive approval from the credit card company.

   - **a.** prepaid card.
   - **b.** co-signed card.
   - **c.** travel and entertainment card.
   - **d.** reward card.

7. **Calculate** Tula has a $3,000 credit card balance that she revolves month to month. What is her minimum monthly payment if the credit card company calculates the payment based on 4% of the outstanding balance?
   - **a.** $12. **c.** $1,200.
   - **b.** $120. **d.** $1,440.
8. **Calculate** Tula has a $3,000 credit card balance. This month Tula made the minimum payment of $90. How much will she pay in interest this month if her credit card charges a 19% APR? Assume a 30-day billing period

Adventures in Personal Finance

Short Answer

1. If Sally was to only pay the minimum payment on her credit card loan, how would that payment amount change over time?
2. There are several ways in which credit card lenders can make money from cardholders. Name three cardholder behaviors that will help minimize their costs as borrowers.

Explore

1. **Calculate** Making only the minimum payment on a credit card can be costly because you will pay much more in interest over the life of the loan. For this exercise, assume the following facts:
   - Credit card balance is $1,000.
   - Credit card APR is 20%.
   - Minimum payment percentage is 2%.

   Visit an online credit card calculator (such as that provided by the **Navy Federal Credit Union**) to answer the following questions.
   - **a.** What is the minimum payment this month on the credit card?
   - **b.** How long will it take to pay off the credit card balance if only the minimum payment is made?
   - **c.** How much interest will be paid on the loan if only the minimum payment is made?
   - **d.** What is the best way to reduce the total cost of interest paid on a credit card loan?

4. **Writing** **Presentation** A national shift toward smart-chip technology (sometimes called EMV) is revolutionizing the credit card industry. Investigate the primary reasons credit card companies are moving toward smart-chip technology and away from traditional credit cards with a magnetic strip. Prepare a brief report and present your findings in class.

Expanded Learning Activity

Writing The Credit Card Accountability, Responsibility, and Disclosure (CARD) Act of 2009 took full effect on February 22, 2010. The **Consumer Financial Protection Bureau (CFPB)** administers it. Research this legislation using resources available on the CFPB website. Write a fact sheet that highlights the major consumer benefits provided by the act. Additionally, find a credit card disclosure statement and determine how easy it would be for someone without a credit card to understand the terms and conditions offered by the credit card issuer.

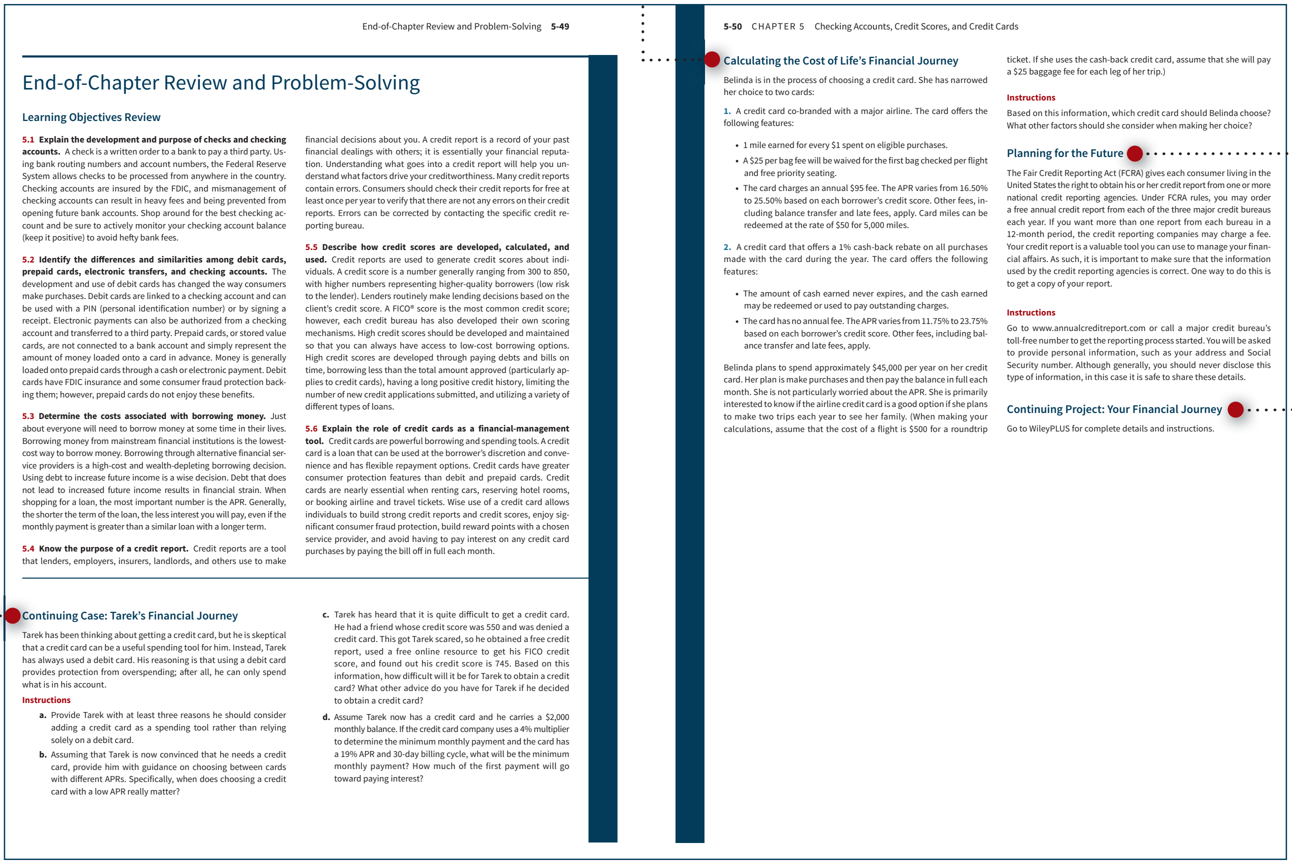
End-of-Chapter Problem Solving

Calculating the Cost of Life's Financial Journey

Calculating the Cost of Life's Financial Journey provides students with calculation-based questions that have been written to be fun and challenging. Through the process of addressing analytical questions, students will gain confidence in doing time value of money and other basic math calculations.

Planning for the Future

Each Planning for the Future case was written to be as close to real-life as possible. In this way, students can help solve true-to-life practice problems as a way to prepare for situations and events that they may one day face themselves.



End-of-Chapter Review and Problem-Solving 5-49

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

5.1 Explain the development and purpose of checks and checking accounts. A check is a written order to a bank to pay a third party. Using bank routing numbers and account numbers, the Federal Reserve System allows checks to be processed from anywhere in the country. Checking accounts are insured by the FDIC, and mismanagement of checking accounts can result in heavy fees and being prevented from opening future bank accounts. Shop around for the best checking account and be sure to actively monitor your checking account balance (keep it positive) to avoid hefty bank fees.

5.2 Identify the differences and similarities among debit cards, prepaid cards, electronic transfers, and checking accounts. The development and use of debit cards has changed the way consumers make purchases. Debit cards are linked to a checking account and can be used with a PIN (personal identification number) or by signing a receipt. Electronic payments can also be authorized from a checking account and transferred to a third party. Prepaid cards, or stored value cards, are not connected to a bank account and simply represent the amount of money loaded onto a card in advance. Money is generally loaded onto prepaid cards through a cash or electronic payment. Debit cards have FDIC insurance and some consumer fraud protection backing them; however, prepaid cards do not enjoy these benefits.

5.3 Determine the costs associated with borrowing money. Just about everyone will need to borrow money at some time in their lives. Borrowing money from mainstream financial institutions is the lowest-cost way to borrow money. Borrowing through alternative financial service providers is a high-cost and wealth-depleting borrowing decision. Using debt to increase future income is a wise decision. Debt that does not lead to increased future income results in financial strain. When shopping for a loan, the most important number is the APR. Generally, the shorter the term of the loan, the less interest you will pay, even if the monthly payment is greater than a similar loan with a longer term.

5.4 Know the purpose of a credit report. Credit reports are a tool that lenders, employers, insurers, landlords, and others use to make financial decisions about you. A credit report is a record of your past financial dealings with others; it is essentially your financial reputation. Understanding what goes into a credit report will help you understand what factors drive your creditworthiness. Many credit reports contain errors. Consumers should check their credit reports for free at least once per year to verify that there are not any errors on their credit reports. Errors can be corrected by contacting the specific credit reporting bureau.

5.5 Describe how credit scores are developed, calculated, and used. Credit reports are used to generate credit scores about individuals. A credit score is a number generally ranging from 300 to 850, with higher numbers representing higher-quality borrowers (low risk to the lender). Lenders routinely make lending decisions based on the client's credit score. A FICO® score is the most common credit score; however, each credit bureau has also developed their own scoring mechanisms. High credit scores should be developed and maintained so that you can always have access to low-cost borrowing options. High credit scores are developed through paying debts and bills on time, borrowing less than the total amount approved (particularly applies to credit cards), having a long positive credit history, limiting the number of new credit applications submitted, and utilizing a variety of different types of loans.

5.6 Explain the role of credit cards as a financial-management tool. Credit cards are powerful borrowing and spending tools. A credit card is a loan that can be used at the borrower's discretion and convenience and has flexible repayment options. Credit cards have greater consumer protection features than debit and prepaid cards. Credit cards are nearly essential when renting cars, reserving hotel rooms, or booking airline and travel tickets. Wise use of a credit card allows individuals to build strong credit reports and credit scores, enjoy significant consumer fraud protection, build reward points with a chosen service provider, and avoid having to pay interest on any credit card purchases by paying the bill off in full each month.

Continuing Case: Tarek's Financial Journey

Tarek has been thinking about getting a credit card, but he is skeptical that a credit card can be a useful spending tool for him. Instead, Tarek has always used a debit card. His reasoning is that using a debit card provides protection from overspending; after all, he can only spend what is in his account.

Instructions

a. Provide Tarek with at least three reasons he should consider adding a credit card as a spending tool rather than relying solely on a debit card.
b. Assuming that Tarek is now convinced that he needs a credit card, provide him with guidance on choosing between cards with different APRs. Specifically, when does choosing a credit card with a low APR really matter?
c. Tarek has heard that it is quite difficult to get a credit card. He had a friend whose credit score was 550 and was denied a credit card. This got Tarek scared, so he obtained a free credit report, used a free online resource to get his FICO credit score, and found out his credit score is 745. Based on this information, how difficult will it be for Tarek to obtain a credit card? What other advice do you have for Tarek if he decided to obtain a credit card?
d. Assume Tarek now has a credit card and he carries a $2,000 monthly balance. If the credit card company uses a 4% multiplier to determine the minimum monthly payment and the card has a 19% APR and 30-day billing cycle, what will be the minimum monthly payment? How much of the first payment will go toward paying interest?

5-50 CHAPTER 5 Checking Accounts, Credit Scores, and Credit Cards

Calculating the Cost of Life's Financial Journey

Belinda is in the process of choosing a credit card. She has narrowed her choice to two cards:

1. A credit card co-branded with a major airline. The card offers the following features:
   - 1 mile earned for every $1 spent on eligible purchases.
   - A $25 per bag fee will be waived for the first bag checked per flight and free priority seating.
   - The card charges an annual $95 fee. The APR varies from 16.50% to 25.50% based on each borrower's credit score. Other fees, including balance transfer and late fees, apply. Card miles can be redeemed at the rate of $50 for 5,000 miles.
2. A credit card that offers a 1% cash-back rebate on all purchases made with the card during the year. The card offers the following features:
   - The amount of cash earned never expires, and the cash earned may be redeemed or used to pay outstanding charges.
   - The card has no annual fee. The APR varies from 11.75% to 23.75% based on each borrower's credit score. Other fees, including balance transfer and late fees, apply.

Belinda plans to spend approximately $45,000 per year on her credit card. Her plan is make purchases and then pay the balance in full each month. She is not particularly worried about the APR. She is primarily interested to know if the airline credit card is a good option if she plans to make two trips each year to see her family. (When making your calculations, assume that the cost of a flight is $500 for a roundtrip ticket. If she uses the cash-back credit card, assume that she will pay a $25 baggage fee for each leg of her trip.)

Instructions

Based on this information, which credit card should Belinda choose? What other factors should she consider when making her choice?

Planning for the Future

The Fair Credit Reporting Act (FCRA) gives each consumer living in the United States the right to obtain his or her credit report from one or more national credit reporting agencies. Under FCRA rules, you may order a free annual credit report from each of the three major credit bureaus each year. If you want more than one report from each bureau in a 12-month period, the credit reporting companies may charge a fee. Your credit report is a valuable tool you can use to manage your financial affairs. As such, it is important to make sure that the information used by the credit reporting agencies is correct. One way to do this is to get a copy of your report.

Instructions

Go to www.annualcreditreport.com or call a major credit bureau's toll-free number to get the reporting process started. You will be asked to provide personal information, such as your address and Social Security number. Although generally, you should never disclose this type of information, in this case it is safe to share these details.

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

Continuing Case

The Continuing Case tracks a recent college graduate (Tarek) as he begins his lifetime financial journey. Students will provide guidance on ways to increase Tarek's cash flow, decrease debts, pay taxes, purchase insurance, make saving and investing decisions, create an estate plan, and plan for the future in other meaningful ways.

Continuing Project

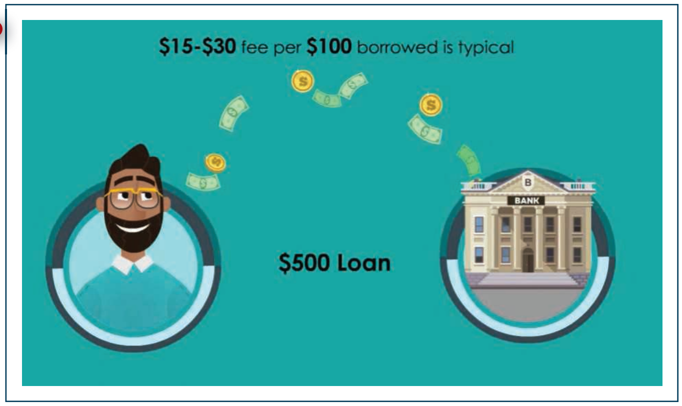
The Continuing Project helps students develop, implement, and monitor a spending plan. Students who follow the project from the first to last chapter will finish the course with a way to manage day-to-day financial questions and concerns.

Engaging Digitally

Introduction to Personal Finance is completely integrated with WileyPLUS, featuring a suite of teaching and learning resources developed under the close review of the authors. Driven by the same basic beliefs as the text, WileyPLUS allows students to create a personalized study plan, assess their progress along the way, and access the content and resources needed to master the material. Features of the WileyPLUS course include the following:

Animations

Animations review concepts discussed in the corresponding eTextbook for selected learning objectives and provide students with the option to read the text, watch the animation, or both.

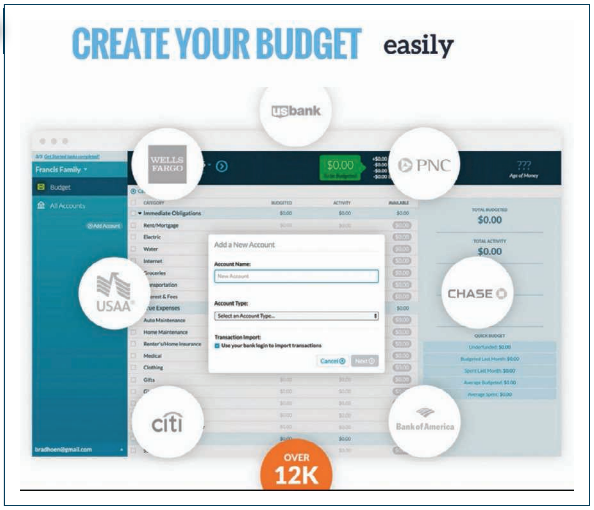


Peer-to-Peer Videos

Integrated videos with discussion questions featuring students, peers, and professionals reinforce key concepts from selected learning objectives and illustrate how financial decisions impact their lives.

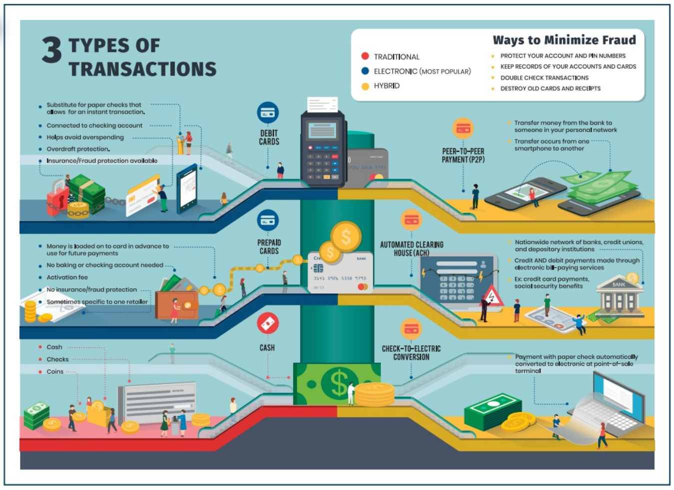
Budgeting Project Videos

Using the award-winning You Need a Budget app, students set up a personal budget with video guidance from experts.



Infographics

Approachable infographics increase student understanding of complicated topics by showing relationships between concepts within a learning objective.



In addition, other WileyPLUS learning opportunities include:

- **Interactive Surveys and Illustrations** engage students more actively with the content, and provide opportunities for active learning and critical thinking.
- **Wiley Finance Updates** (wileyfinanceupdates.com) provide faculty and students with curated news articles and suggested discussion questions weekly.
- **Flashcards and Crossword Puzzles** help students study and master basic vocabulary and concepts.
- **Section-Level Practice** quickly and effectively tests student understanding of the material they have just covered (at the learning objective level).
- **Adaptive Practice** helps students quickly understand what they know and what they don't know, and provides endless opportunities for practice to effectively prepare for class or quizzes and exams. Students can measure outcomes with visual reports to gauge problem areas. Instructors can assess real-time engagement and performance of each student to inform teaching decisions.

Acknowledgments

Introduction to Personal Finance has benefited tremendously from the input of students who have used this text's material in class, our teaching colleagues who have adopted the text, manuscript reviewers, and those who have supported the writing. We are very appreciative of all the suggestions and comments received. The thoughts, ideas, and recommendations of reviewers, editorial staff, and ancillary authors is deeply appreciated.

Janice Akao
Butler Community College

Nathan Akins
Chattahoochee Technical College, Marietta

Kristy Archuleta
Kansas State University

Kristine Beck
California State University, Northridge

Connie Belden
Butler Community College

Charles Blaylock
Henderson State University

Elizabeth Briggs
Louisiana State University

Leah Busby
Lamar State College, Orange

Swarn Chatterjee
University of Georgia

Inga Chira
California State University, Northridge

Bill Chittenden
Texas State University

Thomas Coe
Quinnipiac University

Shannah Compton-Game
California State University, Northridge

Akash Dania
Alcorn State University

James A. Donahou
Liberty University, Indiana Wesleyan University, Mississippi University for Women

Howard Eskew
San Diego Mesa College

John Fitzgerald
Ball State University

Philip Gibson
Winthrop University

Martie Gillen
University of Florida

Terri Gonzales-Kreisman
Delgado Community College

Richard Gordon
Illinois State University

Matt Goren
University of Georgia

Xiaoting Hao
University of Wisconsin, Milwaukee

Robin Henager
Whitworth University

Alison Hollingsworth
Gadsden State Community College

Jennifer Hunter
University of Kentucky, Lexington

Samira Hussein
Johnson County Community College

Alena Johnson
Utah State University

Jesse Ketterman
University of Maryland Extension

Konnie Kustron
Eastern Michigan University

Pamela LaBorde
Western Washington University

Irene Leech
Virginia Tech University

Jodi Letkiewicz
York University

Xiaohui Li
Northern Illinois State University

Zhe Li
Framingham State University

Brenda Long
Michigan State University Extension, Greening Michigan Institute

Alice Lou
Columbia College

Leslie Mathis
University of Memphis

Patricia Maynard
University of Maryland Extension

Michael McGonigle
New Mexico State University

Tim Mooney
Pacific Lutheran University

Mike Morgan
University of Southern Mississippi

Bob Musumeci
Indiana University

Humnath Panta
Brenau University

Teddi Jo Paulson
University of Jamestown

David Pecha
Northwestern Oklahoma State University

James Philpot
Missouri State University

Gary Radine
San Jose State University

Mitchell Ratner
Rider University

Greg Richey
University of California, Riverside

Elven Riley
Seton Hall University

Elizabeth Rogol
Kutztown University

Mia Russell
University of Maryland Extension

Salil Sarkar
University of Texas Arlington

Beth Scull
University of South Carolina, Columbia

Oscar Solis
Virginia Polytechnic Institute and State University

Katherine Spradley
Campbell University

Sandra Streitenberg
Edison State Community College

Linda Tarrago
Hillsburgh Community College

Diana Tempski
University of Wisconsin, La Crosse

Erica Tobe
Michigan State University

Omer Unsal
Merrimack College

Tom Warschauer
San Diego State University

Michele Wedel
Indiana University, Purdue University

Sally Wells
Columbia College

Duncan Williams
Western Carolina College

Jennifer Wilson
Texas Tech University

Xiaoyan Xu
San Jose State University

Diana Yacob
University of Maryland Extension

Tansel Yilmazer
Ohio State University, Columbus

We also want to thank several individuals for their help in moving this text from concept to publication. This work would not have come to fruition without the extensive support and guidance of Emily Marcoux, Michael McDonald, Joel Hollenbeck, Jennifer Welter, Ed Brislin, Elena Saccaro, Kirsten Loose, Terry Ann Tatro, and Jackie Henry at Aptara. We are also indebted to our friend and colleague, Charles Chaffin, who acted as a sounding board for ideas, and others, including Tula Batanchiev, for encouragement and support. We also very much appreciate the support of our colleagues who showed great patience as we embarked on this writing project, including Sheri Worthy, Swarn Chatterjee, Joe Goetz, Kenneth White, Ann Woodyard, and Kristy Archuleta. Finally, many thanks to all of our students who have, over the years, made valuable suggestions and comments to make this text so vibrant and applicable.

We appreciate suggestions and comments from users—instructors and students alike. You can send your thoughts and ideas about the text to us via email at grable@uga.edu or lpalmer@uga.edu.

John Grable
Athens, Georgia

Lance Palmer
Athens, Georgia

Contents

Introduction to Personal Finance

Beginning Your Financial Journey

CHAPTER 1

Beginning Your Financial Journey: The Interior Finance Point of View

LWA/Dann Tardif/Blend Images/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

1.1 Describe how your financial knowledge, experience, risk tolerance, and feelings of control influence the way you view the financial world.

1.2 Explain how your human and social capital relate to your financial well-being.

1.3 Discuss how financial risk tolerance relates to financial goal achievement.

1.4 Use your unique time perspective to create SMART financial goals.

1.5 Describe strategies to overcome mental biases and improve financial decision making and well-being.

Your interaction with and use of money is a lifetime journey. This text will help prepare you to successfully navigate the financial decisions in your life. We will provide you with the tools—both conceptual and functional—that will enhance your financial literacy and capabilities.

What do we mean by **financial literacy**? Some have described financial literacy as financial education or being knowledgeable. Some think financial literacy is the same as having a background in economics. Others see financial literacy as being a streetwise consumer. In actuality, financial literacy can mean any and all of these things, plus a whole lot more, including:

- Realizing how personal and economic factors impact a household's financial situation.
- Being able to apply basic time value of money concepts.
- Developing a balance sheet.
- Creating a budget and then tracking income and expenses on a monthly basis.
- Calculating and managing personal taxes.
- Knowing the costs and benefits of borrowing money.
- Determining basic saving and investing choices.
- Understanding the important role insurance plays in managing uncertainty.
- Planning for unforeseen life and death issues.
- Being able to navigate effectively through the financial marketplace.

We believe that learning these financial literacy topics can be fun and provide you with a foundation to make wise financial decisions today and in the future. This first chapter focuses on what we are calling interior finance issues, or the factors that make you who you are, such as your willingness to take risks, perceptions, preferences, decision-making style, and human capital.

Your Starting Point

Let's get started by having some fun. The following is a short questionnaire that you can use to gauge where you are starting on your financial journey in this class. The instructions are easy: just answer honestly.

What's Your Financial Literacy?

	True	False
1. The best way to get wealthy over time is to play it safe and keep your money in places like bank accounts.	☐	☐
2. When you go shopping, you usually buy things you want even if you don't have the cash to pay for the items.	☐	☐
3. It would be better to make $100 today than to wait 3 months to receive $125.	☐	☐
4. When you think about savings, the term "CD" means compact disc.	☐	☐
5. The most valuable investment you will ever own is your house.	☐	☐
6. You only need to use a budget after you finish school.	☐	☐
7. All debt is bad.	☐	☐
8. The best way to live financially is day-to-day, dealing with things as they happen.	☐	☐
9. Becoming a millionaire in your lifetime is unrealistic.	☐	☐
10. When buying something, what really matters is whether you can make the monthly payment, not what the item costs.	☐	☐
Total Number of True Responses: ________		

How did you do? It turns out that the correct answer to every question is "false." Your score is the sum of your "true" responses. Here is how to interpret your score:

- **0 to 1:** You are starting this class with confidence and good judgment.
- **2 to 4:** Sure, you missed a few questions, but overall you are off to a good start.
- **5 to 7:** Okay, you missed several questions. This means that an opportunity exists to learn new concepts that can increase your financial confidence.
- **8 to 10:** You have come to the right spot for help. The material in this text will help you improve the way you are dealing with your financial situation.

Let's now get started learning how to successfully navigate the financial decisions in your life so that you can begin to achieve your lifetime dreams and goals!

Your Journey to Financial Well-Being

LO 1.1 Describe how your financial knowledge, experience, risk tolerance, and feelings of control influence the way you view the financial world.

As you begin your lifetime financial journey, ask yourself this: What are your thoughts about money? Is it a tool that you use to buy what you need and want? Is it a source of comfort in knowing that you have extra resources in the bank? For some, just the thought of not having enough money, or sometimes having too much money, can cause stress. For others, the same thoughts about money are a source of excitement. As a result, depending on your perceptions about money and your financial situation, you might view your financial journey as either an adventure fraught with peril or one brimming with opportunity. In this topic, we discuss how you can help to ensure the latter.

Your Internal View of the Financial World

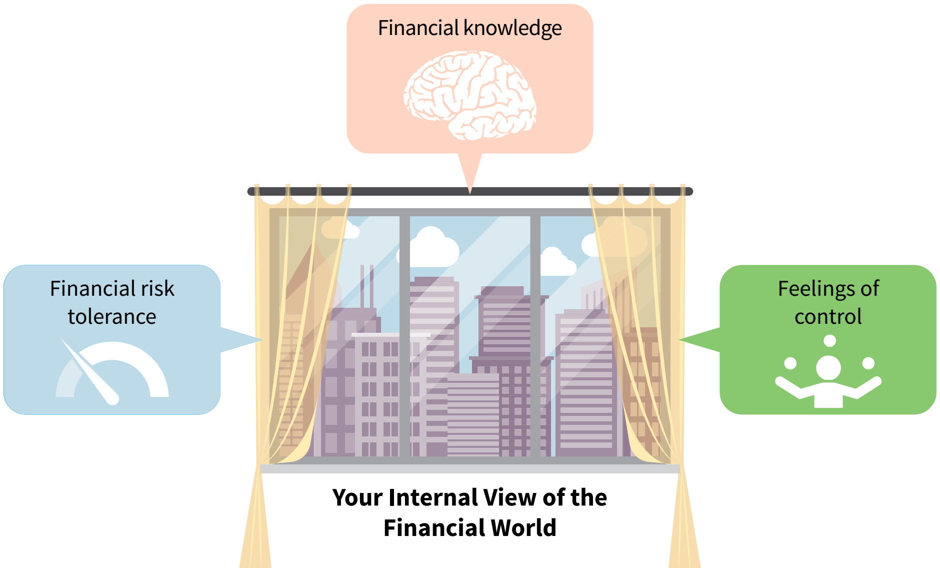
Rather than starting your financial journey with facts, figures, charts, and statistics, let's start instead by assessing your internal view of the financial world. As shown in **Illustration 1.1.1**, **internal finance** is essentially the combination of:

1. Financial knowledge.
2. Financial risk tolerance.
3. Feelings of control.

Although we'd like to believe that we always act rationally, the truth is that some of our decisions can be based on a biased view of the financial world.

ILLUSTRATION 1.1.1

Internal View of the Financial World



Financial Knowledge

As you begin to gain **financial knowledge**—the ability to understand personal finance information—you will notice that your current perceptions about finances will change.

Knowing who you are, where you want to go, and what skills you currently possess are essential factors shaping your financial journey. As you apply your financial knowledge, develop skills, and organize your finances to achieve your personal goals, your confidence and peace of mind regarding your financial situation, or your **financial well-being**, will increase.

Financial Risk Tolerance

Your **financial risk tolerance** is your willingness to engage in financial endeavors that have uncertain outcomes.

- Some people are natural risk-takers. They might plan their financial journey and then later completely deviate from it, looking to take advantage of the latest financial opportunities.
- Others would rather avoid risks if they can. As you might imagine, those who prefer to avoid risk often feel more comfortable with a detailed plan for every step of their financial journey.
- Some are in the middle. They are willing to take risks when they believe the rewards are high enough.

It's worth remembering that everyone's financial journey is different. Given its importance, we explore financial risk tolerance in depth in another chapter.

Feelings of Control

HELPFUL HINT

Although there is no single correct way to think about control issues, it can be useful just knowing how this factor can shape your own financial journey.

At this point, it's also important to account for your **feelings of control**. Think of these feelings as the amount of control you feel you have when making financial decisions (see **Helpful Hint**).

- Some people believe that what happens to them is based on luck or fate. They might view their financial journey as uncertain.
- Others might believe that what happens to them is shaped primarily by their own efforts. They might perceive their financial journey as something to conquer.

As you start to think about where you are today emotionally and financially, and where you want or need to be in the future, know that your current financial risk tolerance and feelings of control are only a starting point. You'll probably find that your view of the world will change as you gain more knowledge and experience. That's the fun part of learning!

Launching Your Lifetime Financial Journey

One of the exciting things about beginning your financial journey, or for some jumping ahead in their current journey, is thinking about all the opportunities that await in the future. Consider **Illustration 1.1.2**, which shows the major events that many people experience during their lifetimes, including lower-cost adventures like vacations to very high-cost events like starting a family.

Keep in mind, as you look at the events in Illustration 1.1.2, that nearly every occurrence shown entails the management and expenditure of financial resources. Although you can deal with these events as they come up by using your current income and hoping for the best, there's a better route. You can continue to increase your financial skills and abilities, which in turn can positively influence your financial behavior and well-being.

For people who manage money well:

- Wealth grows at an accelerating rate over their lifetime.
- Their time and energy are not as constrained by finances.

In contrast, people who don't manage money well may miss out on a myriad of opportunities and be forced to make difficult financial decisions.

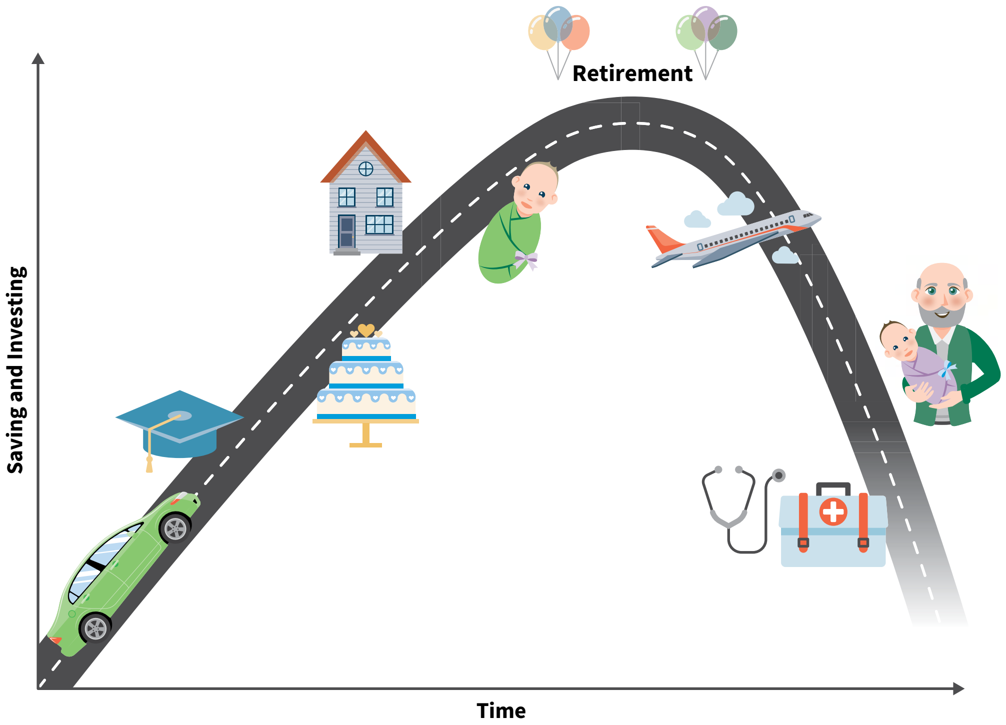


ILLUSTRATION 1.1.2

Life's Journey: A Costly Adventure

Behavioral Outcomes

The graph in Illustration 1.1.2 doesn't depict all the other adventures, accomplishments, setbacks, and mundane occurrences that also enrich and challenge our lives along the way. Regardless of the significance of the events, financial knowledge can play an important role in making each of our personal journeys more meaningful by influencing our behavior (see **Helpful Hint**).

- If you keep working to increase your financial knowledge, you can start planning now for your life's journey.
- Those who increase their financial knowledge and skills tend to experience greater financial well-being (see **Illustration 1.1.3**).

HELPFUL HINT

Financial literacy is one of the most important predictors of savings and investment success and overall well-being.

ILLUSTRATION 1.1.3

Financial Knowledge and Skills Support Financial Well-Being

Gaining Perspective

Can your financial knowledge influence outcomes on a larger scale? Consider the U.S. economy, which is among the largest in the world. When economists talk about "large," they're referring to gross domestic product.

- **Gross domestic product (GDP)** is measured by adding up how much a country produces in goods and services in a year.
- Everything from the value of cars to the value of the shrubs and flowers purchased at a local store is included in GDP.

- Some things are not counted, for example, the value of housework performed by the occupant.

In 2017, the U.S. GDP was $19.42 trillion. To put that into perspective, that's the same as owning 514 million $35,000 automobiles. How could you, even if you gained a tremendous amount of financial knowledge, influence that huge number? The surprising thing is that you can. For example, nearly two-thirds (66%) of GDP consists of consumer spending. So the more you, your friends, and your neighbors purchase, the larger GDP becomes. On the other hand, if you and others slow down or stop spending, GDP goes down. As such, you can help shape, in a small way, what products are made, how much is charged, and what the future direction of the economy will be (see **Helpful Hint**). Now you can see how small transactions are the key to making a big difference in the economy!

HELPFUL HINT

The smarter you are about financial issues, the bigger impact you can have on the way the U.S. economy grows in the future.

Concepts in Action

A few years ago, *The Wall Street Journal* wrote a story about baby boomers (those born between 1946 and 1964). The newspaper wanted to know if baby boomers were ready to retire. Of the baby boomers surveyed for the story, nearly one-half worried that they wouldn't have enough money to live comfortably in retirement. Why is this a potential problem for the U.S. economy in the future?

Solution

This could spell bad news for the U.S. economy in the future because if baby boomers have less money to spend in retirement, the GDP might stagnate or fall. One reason some baby boomers are concerned is because when they were young, they tended to spend more than they earned. In other words, they borrowed a lot of money. On the other hand, those who were smart about money, that is, those who saved and paid down their debt, are feeling good about the future. The lesson here is to take your financial journey seriously. Doing so will improve your chances of having a life of financial security.

Source: A. Tergesen, "Everybody Says You Should Downsize: Everybody May Be Wrong," *The Wall Street Journal* (December 10, 2012), p. R1.

The Journey to Financial Well-Being

Key Personal Behavior

So what does it take to become financially knowledgeable and skilled at managing your financial situation? The good news is that financial knowledge and skill development is something that's learned—no one is born with these characteristics. Yet regardless of how much financial knowledge you acquire, knowledge is useless unless it's also accompanied by some key personal behaviors such as:

- Self-control.
- A desire to apply financial information to the management of your household.
- Continuing to learn about personal finance topics.

Does this sound like you? If not, no worries! Your motivation to gain and apply financial knowledge will grow as you learn about and use the tools that can help you to manage your resources, keep good records, earn money, manage taxes, spend carefully, save wisely, invest strategically, maintain appropriate insurance, and plan for your future.

Picturing the Future

Envisioning the future is not easy, but it can be exhilarating. Do you have a long-term life vision? Have you thought about what ultimately would make you feel happy and fulfilled?

One way to begin planning for the future is to ask yourself a series of questions, such as the following:

- What type of job will you be seeking? In what geographic area?
- Do you plan to live alone or with a significant other? Do you want children?
- What type of residence (house, apartment, RV) sounds ideal?
- Do you like the idea of taking yearly vacations? If yes, where, when, and at what cost?
- How would you like to spend your retirement years?

Don't forget about your short-term, day-to-day dreams either. For example, are you okay with an older car or would you like a new sporty model?

Asking these types of questions helps create a **financial roadmap**, a course that will help you outline how to apply your financial knowledge to achieve your life vision. And just like you might ask **Google Maps** to route a trip that bypasses crowded highways in search of out-of-the-way places, you can set a path that will help you avoid certain pitfalls, bad outcomes, and unexpected delays. With a financial roadmap, you can work toward reaching your financial dreams and goals.

End-of-Topic Assessment

Multiple-Choice Questions

1. Financial knowledge refers to:

a. how well you manage the financial stressors in your life.
b. how well you understand personal finance information.
c. how well you score on standardized measures of personal finance.
d. your maximum score on a comprehensive consumer finance test.

2. Which of the following strategies is most likely to increase your confidence about your financial future?

I. Applying your financial knowledge.
II. Organizing your finances to achieve your personal goals.
III. Borrowing money to improve GDP.

a. I only.
b. II only.
c. I and II only.
d. I, II, and III.

3. The way you view the financial world is shaped most profoundly by:

a. your teachers.
b. your feelings about the world economy.
c. the news media and reports of GDP.
d. your financial knowledge, financial risk taking, and feelings of control over your situation.

4. People who ____________ are less likely to feel that they are in control of their financial future.

a. are knowledgeable about money issues
b. believe that they can control their own destiny
c. believe strongly in luck and fate
d. understand the nature of risks and returns

5. Nigel believes that most "rich people" obtained their wealth either through hard work or by investing wisely. Assuming Nigel adopts this same perspective as a guide to his own spending and saving behavior, he is most likely to become:

a. more knowledgeable about the financial marketplace over time and increase his personal wealth.
b. disillusioned later in life as he nears retirement.
c. a consistent purchaser of lottery tickets.
d. both disillusioned later in life as he nears retirement and a consistent purchaser of lottery tickets.

6. Now that Graham has graduated college, he is facing several changes in his life. He was recently married and started a new job in a large city. Which of the following events is going to have the highest cost over Graham's life?

a. Purchasing a new car.
b. Paying his undergraduate student loans.
c. Having and raising a child.
d. Paying for vacations on a yearly basis.

7. What is the single largest component of the U.S. GDP?

a. Consumer spending.
b. Business investment.
c. Government spending.
d. The rate of unemployment.

8. In the short term, what might happen if all Americans suddenly learned the foundational concepts of personal finance—they borrowed less, saved more, and spent less—and changed their behavior immediately?

a. More lottery tickets would be purchased because consumers would have more money to spend.
b. GDP would fall because consumers would spend less on goods and services.

c. GDP would increase because the government would have more investments to tax.

d. Confidence about the future would decline because consumers would know what it is going to take to retire and live a comfortable life.

9. Which of the following is most clearly a personal financial strength?

a. A willingness to save money on a regular basis.

b. A willingness to borrow money for day-to-day purchases.

c. A willingness to postpone future goals in pursuit of current objectives.

d. All of these answer choices are correct.

10. Which of the following people is most likely to be considered financially knowledgeable?

a. Jamie, who has low self-confidence, likes to gamble, and rarely tracks news stories online.

b. Todd, who exhibits self-control but is not self-confident or financially experienced.

c. Michelle, who gives regularly to charity, reads about investing, and is self-confident.

d. John, who lives day-to-day and is experienced with investing but sometimes spends more than he earns.

Adventures in Personal Finance

Short Answer

1. Think of one or two people that you would consider financially successful: friends, family members, or those who are famous. Do you think that their financial success was obtained through their own or their family's work and effort, or purely by chance, fate, or luck? Why or why not? Additionally, what might your answer indicate about your perception of the level of control you have over your financial future?

2. How do your feelings of risk tolerance affect your view of the financial world? How can financial literacy change your perception of risk?

3. As noted in the Concepts in Action box, a few years ago *The Wall Street Journal* wrote a story about baby boomers (those born between 1946 and 1964). The newspaper wanted to know if baby boomers were ready to retire. They found that nearly 50% of all baby boomers worry that they won't have enough money to live comfortably in retirement. Do you think the newspaper's findings would have been different if the story was about Gen X (those born between 1965 and 1980), Gen Y/millennials (those born between 1981 and 2000), or Gen Z/boomlets (those born after 2001)? Why or why not?

4. List 10 life events and identify whether they require any short-term or long-term financial resources.

Explore

1. Visit the **U.S. Census Bureau** website and locate the table entitled "Real Gross Domestic Product, Chained (2005) Dollars—Annual Percent Change: 1990 to 2010." The table provides data showing the percent change in GDP from one year to the next. Look specifically for the years 2006, 2007, 2008, and 2009 (these years represent what has since been termed the Great Recession). What happened to national GDP during those years? What might explain the data?

2. **Presentation** Conduct an Internet search using the phrase "financial literacy." What type of programs, study materials, and quizzes are available for free? Share your best findings with others in class.

3. The **National Football League (NFL)** and **Visa, Inc.** have teamed up to promote financial literacy. You can play a realistic football game online either against the computer or a friend. Visit the game's website by searching the Internet for "practical money skills training camp." Next, play a short 5- or 10-minute game. To progress downfield and score points, you must answer financial literacy questions. At the end of the game, assess how well you did, both in points and questions answered correctly. Do you think this type of game would help others learn about financial issues? Why or why not?

Expanded Learning Activity

Writing Visit the **Google Scholar** website and enter "financial literacy" as a keyword search. Choose a paper that matches the search. Read the paper and write a short (300- to 500-word) reaction to the paper. Note that these are research papers, which means that most have references to statistics and other quantitative analyses. When writing your reaction, focus on the key results related to financial literacy rather than the methods used by the paper's authors.

Human Capital: An Essential Element of Financial Well-Being

LO 1.2 Explain how your human and social capital relate to your financial well-being.

We have discussed how financial knowledge and skills are essential in shaping your lifetime financial journey. Closely tied to these factors is your level of human and social capital.

- **Human capital** is your ability and willingness to work, learn, earn, and make wise decisions about how to save and invest money.
- **Social capital** is how well you are able to form connections with other people. As such, your social capital will affect the value of your human capital, particularly how much you earn over your working life span.

In this topic, we discuss how you can optimize your human and social capital to help you increase your financial well-being and achieve your financial goals.

Human Capital

Human capital is your most valuable **asset**—something of value you own. In this section, we discuss those resources that can increase your human capital.

Your Education and Earnings

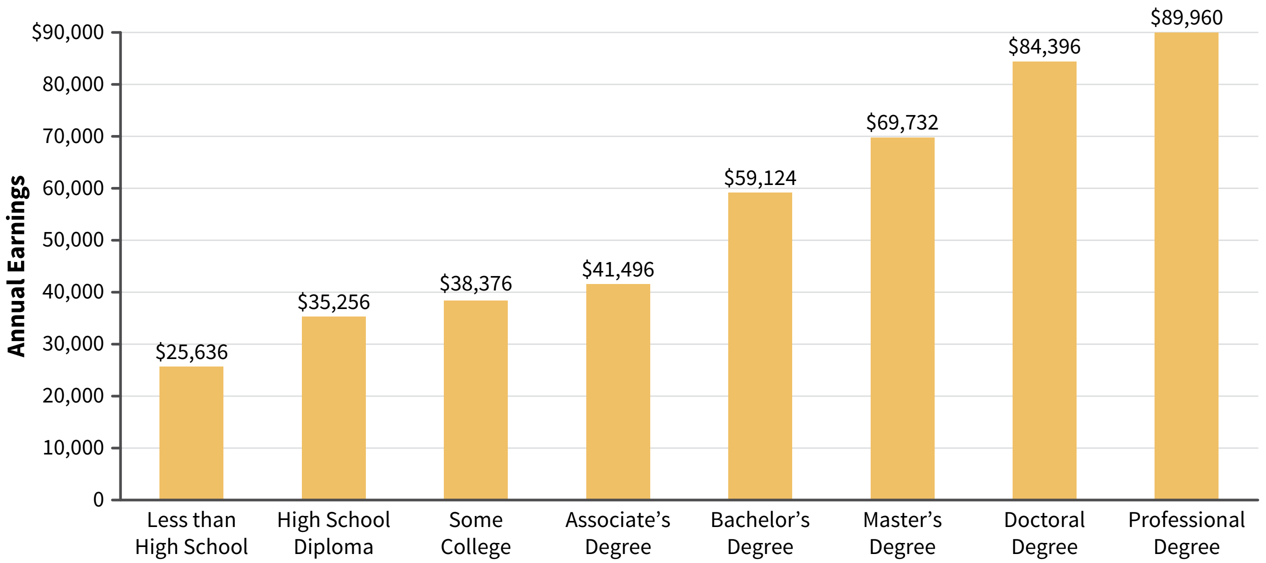
Your earnings are an indicator of the value of your human capital in the labor market. Earnings are often closely associated with your level of formal education. **Illustration 1.2.1** shows how annual earnings increase with formal education.

- Holding a professional degree—a legal or medical diploma, for example—is often a pathway to higher income and human capital.
- Those with an advanced academic degree tend to do better when the economy turns downward (see **Helpful Hint**).

HELPFUL HINT

Those with little or no college education are more likely to lose a job during a recession than those with a college degree or higher level of education.

ILLUSTRATION 1.2.1 **Relationship Between Earnings and Level of Formal Education**



Source: U.S. Bureau of Labor Statistics.

In addition to formal education, other resources also increase your human capital:

- Your health.
- Your willingness to relocate to higher-paying job markets.
- Continuing professional education and skill development.

Your Health

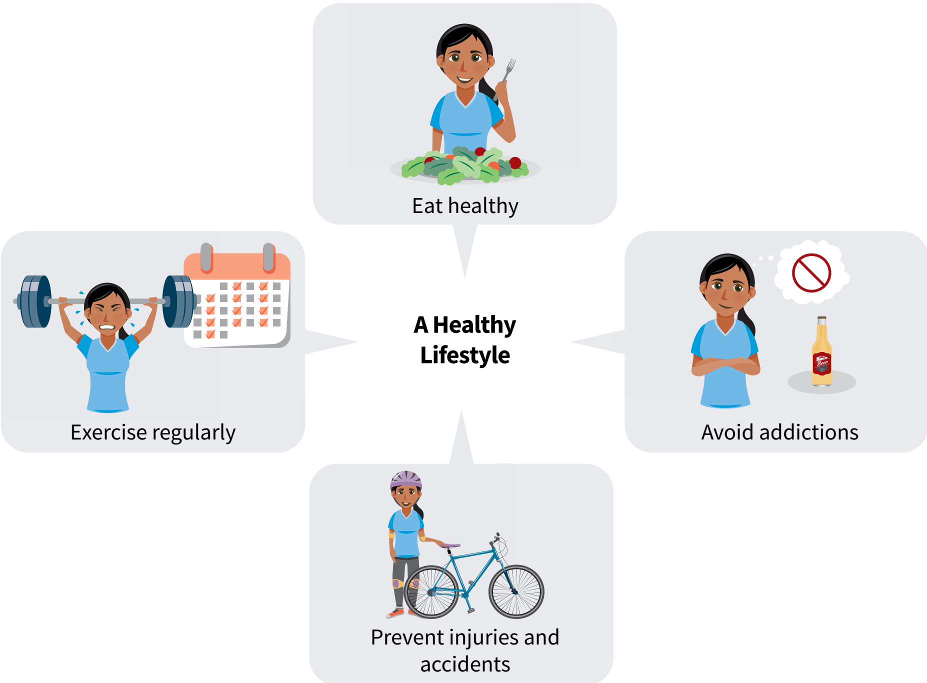
Health affects human capital in both the short and long run.

- Generally, healthy people work more hours and for a longer period of years over their life span compared to those with health problems.
- Thus, healthy people tend to earn more money on an annual basis, as well as over their lifetimes.
- Poor health may result in a lower standard of living across the life span.

Taking care of your body and mind so that you can continue to work is a valuable human capital investment. Consider the behaviors shown in **Illustration 1.2.2**. Actively managing your health by eating a healthy diet, avoiding substance abuse, and preventing and minimizing accidents (by wearing your seatbelt and never texting while driving) all add up to a healthy lifestyle that will extend your life and increase your human capital.

ILLUSTRATION 1.2.2

Healthy Behaviors Affect Human Capital



Willingness to Relocate

Relocating to where specific types of human capital are more valued also increases how much you can earn (see **Helpful Hint**).

- For example, when oil prices are high, mechanics, construction workers, and other skilled and unskilled workers can make more money moving to the oil fields of North Dakota, Alaska, and West Texas compared to staying in places where their skills may not be valued as highly.
- There are also often greater job opportunities for individuals willing to work in a foreign country.

HELPFUL HINT

Those who are mobile tend to earn a higher income over their lifetime financial journey because they can take advantage of location-specific higher income from their work, making it easier to save more money over their work life.

Continuing Education and Skill Development

In addition to formal education, you can also gain valuable human capital through on-the-job training and continuing professional education to:

- Develop specific skills.
- Practice attained skills.
- Apply skill sets.

However, as the economy fluctuates, some forms of human capital may become obsolete. There was a time, for example, when architecture firms hired drafting experts based on drawing skills. But with the advent of computer-aided design (CAD), those in traditional drafting positions had to learn new skills to stay employed. Those who were either unable or unwilling to transition their skill set found that their services were no longer valued or even needed. On the other hand, those who were well-versed in CAD saw their salary levels rise. A key takeaway is this: through continued learning and training, you can preserve and increase your earning potential.

The Relationship Between Human Capital and Financial Wealth

Over the course of your work life, you will want to convert the returns on your human capital, such as earnings, into other forms of wealth, such as retirement savings, real estate, and other assets. This reflects a natural progression.

1. Early in your career, your human capital increases because you are gaining additional education, training, and experience, and likely relocating to accept better jobs.
2. As you continue to gain work experience and additional professional education, your human capital becomes increasingly valuable.
3. Over time, the increase in your human capital may slow because you have less time remaining before you need, or choose, to retire from paid work. However, if you plan wisely, you'll notice that as you age, your financial wealth increases.
4. At some point, you should be able to stop working and rely on your wealth to provide your financial support.

The progressive relationship between human capital and wealth is shown in **Illustration 1.2.3**.

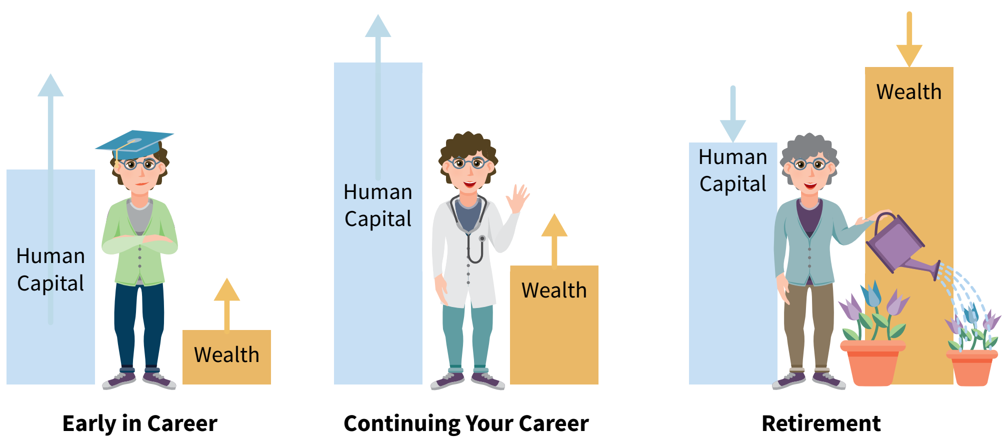


ILLUSTRATION 1.2.3

The Relationship Between Human Capital and Wealth over the Life Span

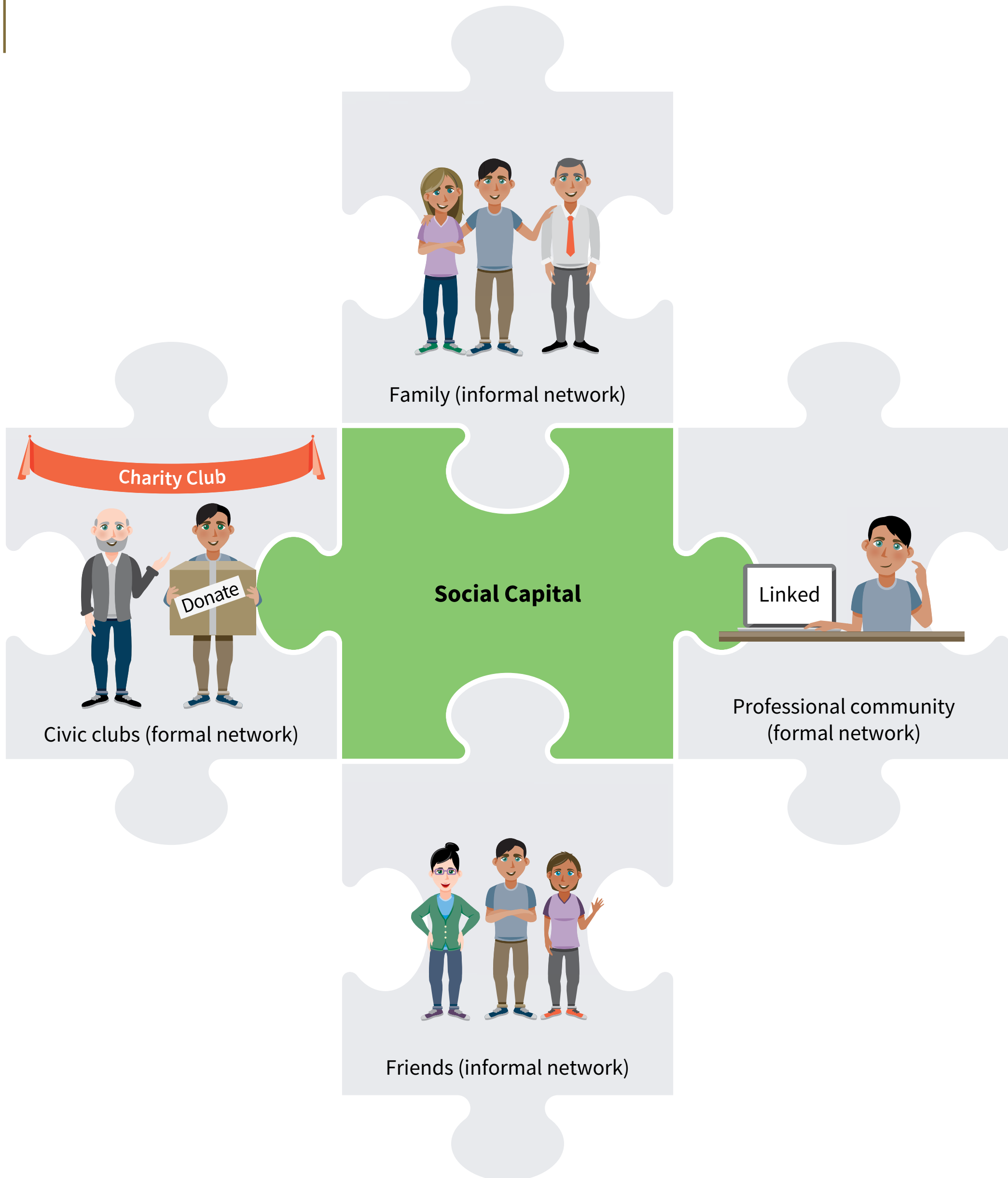
HELPFUL HINT

Be wary of how you present yourself on social media sites and with whom you are sharing your personal information. Employers, for example, routinely monitor such sites when hiring and might be making skewed evaluations about your personal and professional qualifications based on what they see.

Social Capital

Unlike human capital, social capital is not found in individuals themselves but rather in the space between individuals, or the network of connections among people. **Illustration 1.2.4** shows how your social capital is shaped by informal and formal networks (see **Helpful Hint**).

ILLUSTRATION 1.2.4 **Elements of Social Capital**



Informal Networks

Informal networks are the interpersonal relationships you form with your family and close friends.

- Informal networks can provide encouragement and support.
- People in your network might help you find work, give you a place to stay, or lend you money.

People receive many of life's joys from these close relationships. As such, it's important to keep these relationships strong and healthy.

Formal Networks

Formal networks connect you with people in professional, recreational, leisure, and social communities.

- Formal networks include clubs, organizations, and professional associations (see **Helpful Hint**).
- You will find that these types of broader networks will help you advance in your career.

Establishing a variety of professional networks early in life can be valuable as a source of potential contacts for employment.

HELPFUL HINT

A large professional social media network is LinkedIn.

The College Payoff

As we discussed previously, education tends to be positively associated with greater earnings. Let's now take a closer look at how your choice of college and degree program can affect both your human and social capital.

Educational Value

In today's highly competitive world, the search for **educational value**—the point where returns through job placements, income, and human capital outweigh the costs of attendance—is a worthwhile activity. Some of the costs and benefits associated with investing in your human capital are shown in **Illustration 1.2.5**.

- When you go to school to gain new knowledge and skills, you incur costs, such as tuition, fees, and books.
- You may lose some current earnings while you attend school.
- You might need to take out student loans.
- It is important, therefore, to make sure that the expected benefits of attaining additional education, at a minimum, cover these costs.

If you look at only the short-term costs and benefits, education might not seem worthwhile. However, if you look at the long-term payoff, the choice is usually easy: over a working lifetime, those with a professional degree will generally earn over $2 million more than those with only a high school diploma![1]

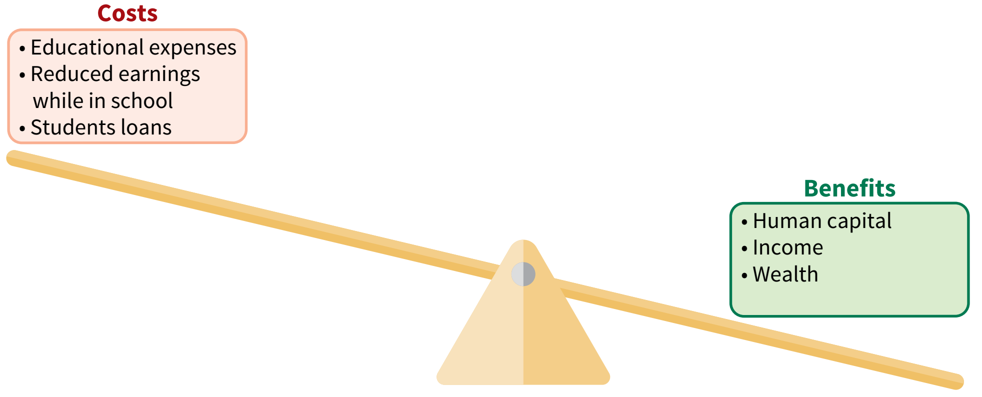


ILLUSTRATION 1.2.5

The Benefits of Higher Education Should Outweigh the Costs

[1] U.S. Bureau of Labor Statistics, *Unemployment Rates and Earnings by Educational Attainment*, 2016.

Investment Payback Period

Regardless of the type of school or educational program you are interested in pursuing, you would be wise to compare the cost of the program to the additional annual income you'll earn once you have completed it. You can use the following formula to estimate how long it will take you to earn back your investment. This is called the **investment payback period**:

$$\textbf{Payback Period} = \frac{\textbf{Total Costs}}{\textbf{Increase in Annual Income}}$$

The longer the payback period, the more you should question the economic value of your investment.

For example, consider Jamal who's 31 and married with two children, ages 9 and 7. Jamal just finished his associate's degree at a local community college. He would now like to finish his bachelor's degree on a full-time basis, which means that he will lose 2 years of income. To determine if this is a wise economic investment, Jamal needs to consider the following:

- Jamal currently earns $35,000 annually.
- He will live with his family, and his wife will continue working while he is in school.
- Tuition, books, and fees will be approximately $13,000 per year, and Jamal plans to use student and personal loans to cover these expenses.
- Jamal will also use student and personal loans to cover $7,000 in additional household expenses each year.
- Jamal believes he can increase his income by $12,000 per year after graduation.

Illustration 1.2.6 shows an **estimate** of Jamal's payback period. A more detailed analysis would take into account the interest rate on the student and personal loans, inflation, the length of loan repayments, faster potential earnings growth, and other factors. Nonetheless, this simple approach can help inform Jamal if going back to school makes financial sense.

ILLUSTRATION 1.2.6

Investment Payback Period Example

Expense Item	Amount
Lost income ($35,000 × 2)	$70,000
Household expense loans	14,000
College tuition, books, and fees	26,000
Total costs	$110,000
Increase in income	$12,000
Payback period ($110,000 ÷ $12,000)	9.17 years

It turns out that it is going to take Jamal about 9 years to break even on his investment, at which point he'll be 42 years old. And if we were to add in interest on the student loans, his payback period would be slightly longer. Considering that most people hope to retire at age 67, that gives Jamal some time to use his increased earnings to save for retirement or purchase investment assets. Of course, if Jamal's income increases by more than $12,000, the payback period will be lower.

The payback period is helpful in making education decisions, but it shouldn't be the only factor considered. For example, the investment payback period calculation doesn't account for the value of Jamal's human and social capital that he'll obtain by finishing school. There's also the personal feeling of satisfaction that is hard to value.

As a result, Jamal might simply use the payback period calculation as a starting point and then explore other options such as:

- Select a different degree that might further increase his potential income after graduation.
- Work part-time during school to reduce the need for loans.
- Seek out scholarships to help cover the cost of tuition.

Jamal might also combine some or all of these options to reduce his payback period and obtain the highest return possible on his human and social capital investment.

Concepts in Action

Nedra is 33 years old. She completed her high school equivalency diploma (GED) and is interested in going back to college to obtain an associate's degree, which will take 2 years.

Nedra currently earns $24,000 but will cut back to part-time while in school. She'll use student loans to fund college costs, which she estimates to be $8,000 per year. Finally, Nedra believes she can increase her income by $8,000 per year after graduation.

Using the following table to make your estimates, what is Nedra's investment payback period?

Investment Payback Period

Expense Item	Amount
Lost income	
Household expense loans	
College tuition, books, and fees	
Total costs	
Increase in income	
Payback period	

Solution

Expense Item	Amount
Lost income	$24,000
Household expense loans	0
College tuition, books, and fees	16,000
Total costs	$40,000
Increase in income	$8,000
Payback period	5 years

It turns out that the return on Nedra's investment is a good one. It will take her approximately 5 years to pay back the educational expenses (a little longer if she includes paying interest on the student debt). She will be 40 years old at that time (2 years of school followed by 5 years of work), which will allow her to use her increased income for other purposes, including saving for retirement and buying investment assets.

End-of-Topic Assessment

Multiple-Choice Questions

1. Your ability to earn money over the working lifetime is called:
   - **a.** social wealth.
   - **b.** human capital.
   - **c.** human wealth.
   - **d.** social capital.

2. Mike earned his bachelor's degree in history 3 years ago and started working shortly thereafter as a teacher. Michelle earned her high school degree 5 years ago and took a job right out of school. Maria earned her associate's degree last year and started work right after graduation. During the next economic recession, who is generally most likely to be unemployed?

- **a.** Mike.
- **b.** Michelle.
- **c.** Maria.
- **d.** Each has an equal probability of becoming unemployed.

3. Which of the following statements about a person's health and wealth is *false*?

- **a.** Healthy people spend more money on food and exercise, which reduces their lifetime wealth accumulation.
- **b.** Unhealthy people tend to work less, which reduces annual earnings and savings.
- **c.** Someone who gets seriously ill may become disabled and be forced out of the labor market, which will reduce income and wealth accumulation.
- **d.** Unhealthy people may be forced to retire earlier than planned, which will reduce income and wealth accumulation.

4. Lance is 25 years old, well-educated, and a smoker. Rob is 35 years old, well-educated, and regularly texts while driving. Tammy is 40 years old, well-educated, drinks a glass of orange juice daily, and exercises regularly. Who has the most human capital potential?

- **a.** Lance.
- **b.** Rob.
- **c.** Tammy.
- **d.** Given their educational achievement, they are all similar.

5. Nick, a skilled welder, had been working for 12 years in a factory that recently closed. This has caused high unemployment in his town and region. If Nick is concerned about maximizing his human capital and lifetime wealth accumulation, which action would be most beneficial?

- **a.** Relocate to a place where his welding skills will be valued in the marketplace.
- **b.** Attend community workshops to learn how to manage household expenses with less income.
- **c.** Lose weight and improve his grooming to enhance his perceived human capital.
- **d.** Increase his posts to social media websites so that others will be more aware of him.

6. Which of the following statements is *true*?

- **a.** Converting human capital to financial wealth depends on wise planning and management.
- **b.** Just before retirement, your financial wealth and human capital are both at their maximum levels.
- **c.** As your financial wealth increases, your human capital remains unchanged over your life span.
- **d.** As you age, your financial wealth remains constant but your human capital declines.

7. Takashi is a foreign-exchange engineering student. His English skills are limited but given his major in college, this has not been a big problem. Jorge is also a foreign-exchange student. He is studying finance and is active in his fraternity. Kim is not enrolled in college. She works 40 to 50 hours a week as a warehouse supervisor; when she is not working, she prefers reading books. Who is most likely to have the highest social capital today and in the future?

- **a.** Takashi.
- **b.** Jorge.
- **c.** Kim.
- **d.** Both Takashi and Jorge because they are enrolled in college.

8. ___________ connects you with people with whom you would not usually socialize.

- **a.** A formal network
- **b.** Bonding social capital
- **c.** Bridging social capital
- **d.** Extended capital structure

9. Barbara is considering two career and educational options, both of which she is excited about. Both options would cost approximately $86,000 in tuition, room, living expenses, books, travel, and fees. Pursuing Option 1 would lead to a job after graduation earning approximately $35,000 per year. Option 2 would lead to a job after graduation earning approximately $40,000 per year. Based on this information, which option has the shortest payback period?

- **a.** Option 1.
- **b.** Option 2.
- **c.** Option 1 and Option 2 have equal payback periods.
- **d.** Not enough information is given to answer the question.

10. Ruby, age 50, is considering going back to school. She would like to retire at age 67. She currently earns $50,000 per year. If she goes back to college and completes a graduate degree, she will earn $55,000 per year. If the total cost of the graduate degree is $75,000, Ruby should:

- **a.** go back to school because the net increase in human capital is greater than the cost of the education.
- **b.** not go back to school because the cost of the degree exceeds the extra income she will earn over her working life.
- **c.** go back to school because any investment in human capital is a wise money-management decision.
- **d.** only go back to school if the time and effort will result in an increase in personal satisfaction and fulfillment.

Adventures in Personal Finance

Short Answer

1. Take an inventory of your health and answer the following questions:

- **a.** Do you consider yourself healthy? Do your health-related habits get in the way of your work or studies?

b. Identify three things that you could begin doing now that would increase your health and hence your human capital.

2. Everyone owns assets. Examples include computers, clothing, and other things you use daily. What security or insurance do you have in place on these assets? Now consider your human capital. What security or insurance do you currently have to protect your human capital?

3. **Writing** Establishing, maintaining, and monitoring your social capital is important. Write a summary describing your relationships with the closest people in your life. What could strengthen those relationships?

4. The **Bureau of Labor Statistics** and the **U.S. Census Bureau** track information on earnings by occupation and education. See if you can rank (from highest to lowest) the occupations based on their average annual income.

______ **a.** Personal financial advisor.	______ **f.** Police officer.
______ **b.** Dentist.	______ **g.** Construction manager.
______ **c.** Massage therapist.	______ **h.** Lawyer.
______ **d.** Social worker.	______ **i.** Kindergarten teacher.
______ **e.** Physician.	______ **j.** Electrical engineer.

Explore

1. **Calculate** **Writing** Take an inventory of your assets—the things you own. What are they approximately worth? Now calculate the value of your human capital. A rough estimate of your human capital is your annual pay (or expected annual pay after you graduate) divided by 0.06. How does this number compare to the value of your other assets? Summarize your calculations and write one to two paragraphs on what you found.

2. Conduct an Internet search using your name as the search term. Based on what you see about yourself, would you feel comfortable if you knew your current and future employers were looking at the same material, including social media web page(s)? Would they conclude that you are professional and a perfect candidate for the job, or would they have reservations? Do you think the image portrayed of you is accurate? If not, what do you need to change?

Expanded Learning Activity

Calculate Estimate the payback period for your educational investment. Specifically, calculate how much tuition, books, fees, and other expenses will be before you complete your desired schooling. Do not include these expenses if someone else is paying these bills (grants, scholarships, employer, and parents). Add in any student loans you have taken out. You can also include what you would be making if you were working instead of attending school, but only if you would be working. The total approximates your investment in education.

Next, look at what you realistically will be earning after you graduate in your desired field. Use information from the **U.S. Census Bureau**, **Bureau of Labor Statistics**, and your school's career center to determine your likely annual salary. Subtract this from what you would earn without your degree (use the minimum wage or approximate a wage of $10 per hour). The difference is the ballpark annual return on investment. Divide the total costs by the annual increase in earnings, and this is your payback period.

a. How long will it take you to pay back the investment, or earn back all of the money you have invested and will invest in your education?

b. Does it seem like a good investment? Can you think of another investment that would give you as large of a return? Will the return on another investment last as long?

c. What are some things that you could do that would make your educational investment even better? Can you reduce the costs, or increase the annual return by redirecting your studies or relocating after you graduate?

Financial Risk Tolerance and Financial Goal Achievement

LO 1.3 Discuss how financial risk tolerance relates to financial goal achievement.

Almost everything that you do during your financial journey entails some degree of risk. **Risk-taking** refers to doing something that involves the possibility of a gain or a loss. Thus, **risk** is the uncertainty associated with any physical, social, emotional, environmental, labor market, or financial activity. For those interested in accumulating wealth (money, real estate, and other assets) over their lifetime financial journey, being willing to take calculated financial risks can be an important internal finance characteristic. People who are unwilling or unable to be at least somewhat aggressive when making financial decisions tend to fall short of their financial dreams. Of course, this is a generalization. For instance, you might know of someone who inherited a large amount of money from a relative and is set for life without taking a risk. For most people, though, taking calculated risks is essential to reaching financial goals.

Financial Risk Tolerance

Risk tolerance is one of those terms that everyone seems to understand, but few can define with clarity. Let's fix that. **Financial risk tolerance** refers to your willingness to engage in a behavior that entails the possibility of a financial loss. If asked, "Are you willing to invest money in the stock market?" your answer will indicate your financial risk tolerance. If you say, "Of course, I am willing to do that," your risk tolerance is greater than someone who says, "No way, the stock market is too risky."

Financial Risk Scale

Here are a few things you should know about financial risk tolerance (see **Helpful Hint**):

1. Your financial risk tolerance lies somewhere on a low-to-high risk scale.
2. Your risk tolerance often changes over time. As your financial knowledge and experience increases, your tolerance for financial risk will also increase.

HELPFUL HINT

Just because you like to take risks in other areas of your life doesn't mean that you're willing to take financial risks. For example, someone who likes to go rock climbing may not be willing to invest in the stock market.

These statements suggest that people who take the time to learn about financial topics and put their new knowledge to work can jump-start their financial journey.

- Financial knowledge creates confidence.
- Confidence helps you engage in new behavior.
- New behaviors provide greater experience.
- Experience produces understanding.

It is this process, as shown in **Illustration 1.3.1**, that will help you move up the risk-tolerance scale. In turn, this new, higher financial risk tolerance will help you to engage in financial behaviors that usually have greater long-term payoffs.

Luck or Effort?

You might have a friend who says something like, "Sure, those who take risks make more money than others, but really it is nothing more than luck." The financial plan for those who believe that luck, rather than knowledge and experience, determines financial outcomes often involves gambling, purchasing lottery tickets, or counting on a big unexpected inheritance. It is important

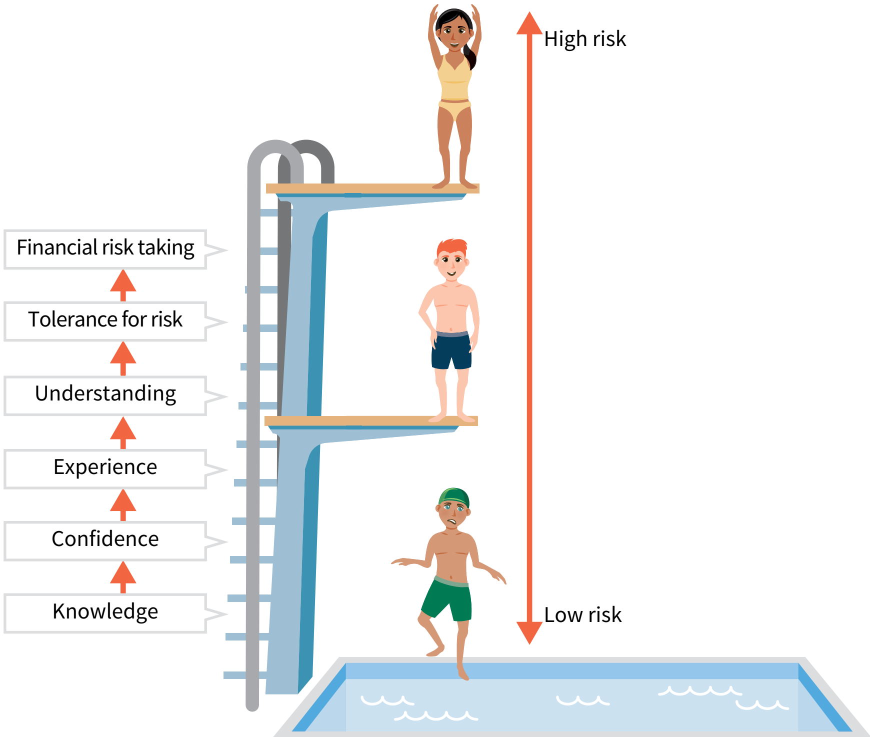


ILLUSTRATION 1.3.1

The Process Leading to an Increased Willingness to Take Financial Risks

that you decide where you stand on this issue. Is your financial future determined primarily by your efforts or by chance? Those who say "chance" typically often make uninformed financial decisions or financial decisions that benefit them in the short run. When they invest, they allocate their money on hunches and whims. Unfortunately, those who rely on chance often fail to do things that build long-term wealth because they don't believe their actions will influence how much wealth they will have in the long run. They buy things they think are investments but turn out to be assets that fall in value. Ironically, they may even perceive that working hard brings them good luck! Consider the following examples:

- Your Uncle Mike buys $10 in lottery tickets every week. His odds of hitting it big are very (very!) low. He might win $100 or even $1,000 every few years, but over time his $10 "investment" is almost certain to return nothing.
- Your Aunt Roberta takes $10 per week and invests it in a mutual fund that returns 5% annually, a low-risk investment. If Aunt Roberta consistently saves weekly for 30 years, she'll end up with over $36,000. Uncle Mike will surely envy those lucky numbers!

Is Aunt Roberta's wealth based on luck? No way. To achieve this outcome, Aunt Roberta needed to research the marketplace to find a reasonable investment that matched her financial risk tolerance. We will discuss in later chapters where and how to find investment alternatives that match your financial risk tolerance, time horizon, and goals.

Financial Risk Tolerance and Wealth Accumulation

Life is full of trade-offs. In the financial marketplace, the primary way to accumulate a certain level of wealth is to take informed financial risks with your savings (see **Helpful Hint**). You must make a choice between security and uncertainty. This brings us back to financial risk tolerance. Are you willing to be adventurous? Are you willing to make an investment that might lose some money in return for potentially making a larger gain?

HELPFUL HINT

Regardless of whether they are high-risk or low-risk endeavors, you should always understand the risks and potential rewards.

As shown in **Illustration 1.3.2**, the relationship between wealth accumulation and risk tolerance is generally positive. So, unless you are willing to take some financial risk, it is going to be difficult to achieve your financial dreams and goals.

- Low-risk investments tend to generate low amounts of investment income and wealth, also known as *investment returns*, and are very predictable.
- If you want greater returns—which will help you to reach your financial goals—you'll need to select investments that have more risk or more volatility, and are less predictable.
- Most importantly, you'll need the risk tolerance to make these investments.

ILLUSTRATION 1.3.2

The Positive Association Between Wealth Accumulation and Financial Risk Tolerance

Let's go back and look at Uncle Mike's situation. Uncle Mike likes playing the lottery. You can bet that he perceives the risk of playing as being very low. He is wrong. The odds of winning typically are one in millions! In this case, perception does not match reality, and clearly Uncle Mike does not understand the risk. Lotteries are very risky, yet many people prefer playing. Why? It comes down to financial knowledge. Most people who play simply are unable to grasp the concept of risk and return. Yes, for some, playing is a form of entertainment, but as a financial plan, lotteries are a horrible deal. In the end, it is a person's willingness to understand and take thoughtful financial risks—with higher potential rewards—that determines long-term financial outcomes.

If your current financial risk tolerance is low, are you doomed to financial failure? Absolutely not! Think of your financial journey as a work in progress. It will take some time to reach your goals. If it's true that those who are willing to take greater financial risk accumulate greater wealth over time, then it also means that the surest way for you to start working toward your goals is to consider ways to better understand the workings of the financial marketplace. It is through this understanding that financial risk tolerance increases (see **Helpful Hint**).

HELPFUL HINT

Keep learning about financial topics; it can be fun and the payoff is sure to be large.

Risk Perception and Risk Preference

By now, you should at least be considering the possibility that your willingness to take informed financial risks is a key factor in how quickly and effectively you might reach your financial dreams and goals. In addition to risk tolerance, two other risk-related factors are also important: risk perception and risk preference.

The Connection between Risk Perception and Risk Preference

How you perceive things shapes your preference and willingness to engage in an activity. For example, say you're invited to a potluck lunch and one of your friends brings sardines (a type of small fish).

- You've never eaten sardines before, and after you smell them, you aren't so sure you want to try.
- By simply looking at and smelling sardines, you perceive that they probably taste bad. This is your **risk perception**, which is your cognitive evaluation of the potential gains and losses associated with a course of action.
- Your immediate reaction may be to avoid sardines. This is your **risk preference**, which is wanting something else compared to the option available.

Someone else may perceive sardines as risky but have a preference to dive in and try it. As shown in **Illustration 1.3.3**, your willingness to take a risk—in this case, a tasting experience—is influenced by your initial perception and your ultimate preference.

ILLUSTRATION 1.3.3
How Risk Perception and Risk Preference Determine Risk Tolerance

Perception and Financial Information

Perceptions are also shaped by the information that is most readily available to us. For example, which activity is more likely to result in death in the United States in a given year, driving a car or being pregnant? The odds of dying from a car accident in any given year are 1 in 47,718. The odds of dying from pregnancy or pregnancy-related complications are 1 in 4,762. Was your perception of these risks accurate? Which of these two events do you hear more about, car accidents or pregnancy complications?

Now consider your perceptions of the financial marketplace.

- If you are unfamiliar with the services and products used to manage money, terms such as stocks, bonds, mutual funds, and annuities may prompt the same reaction you might have to your first encounter with sardines.
- That is, you might perceive financial products as quite risky.
- The result may be a preference to avoid these types of assets.
- However, gaining knowledge about financial products can change these initial perceptions and resulting preferences.

It's important that you get the facts and try some things before you decide whether you will do something. The sooner you realize that initial risk perceptions are often false in the financial world, the better off you will be.

Concepts in Action

How well are you able to perceive risks? Make a quick guess to answer this question: From 1824 to 2013, how many years did the stock market generate a positive return for the year?

Answer choices:

a. The stock market returned a positive annual return for less than 33% of the time.

b. The stock market returned a positive annual return about 50% of the time.

c. The stock market returned a positive annual return for more than 67% of the time.

What is your best guess? Based on your guess, do you think the stock market is a wise investment?

Solution

If you answered "a," which is that the stock market had positive annual returns less than 33% of the time, you likely have a low willingness to take on risk by investing in the stock market. If, on the

other hand, you chose "c," which is that the stock market had positive annual returns at least 67% of the time, you probably have a higher willingness to take on risk by investing in the stock market.

From 1824 to 2013, the stock market actually generated a positive annual return approximately 71% of the time. With this factual knowledge, your risk perception and willingness to take risk may change.

End-of-Topic Assessment

Multiple-Choice Questions

1. Financial risk tolerance can be considered:
   - **a.** on a scale that can change over time.
   - **b.** as a fixed category, such as low or high.
   - **c.** as a passing mood that changes daily.
   - **d.** as a trait that declines over time.
2. Nellie just took a risk-tolerance quiz online and learned that her risk tolerance is in the bottom 10% of all those who have taken the quiz. She should:
   - **a.** be worried because it is unlikely that her risk attitude will ever increase.
   - **b.** be satisfied knowing that she should only invest in low-risk financial products.
   - **c.** not be worried because risk tolerance matters much less than risk preference for those whose goal is to achieve lifetime wealth.
   - **d.** not be worried because her risk tolerance will increase as her knowledge and experience increase.
3. Terry loves to ski, play competitive dodgeball, and go mountain climbing. If asked, Terry would consider sky diving as a hobby. Which of the following statements about Terry is *true*?
   - **a.** Terry's financial risk tolerance is likely very high.
   - **b.** Given the inverse relationship between financial risk tolerance and general behavior, Terry's financial risk tolerance is moderately low.
   - **c.** Terry's perception of financial risks mirrors that of her non-financial behavior.
   - **d.** It is impossible to know what Terry's financial risk tolerance is given the information provided.
4. Who is most likely to accumulate more wealth?
   - **a.** The person who takes a slow-and-steady low-risk approach.
   - **b.** The person who is willing to take big gambles.
   - **c.** The person who is willing to take risk after adequate research.
   - **d.** The person who likes to gamble and play the lottery.
5. Low-risk investments most often:
   - **a.** lead to the best long-term gains.
   - **b.** are generally favored by those with high levels of experience and knowledge.
   - **c.** generate the lowest returns.
   - **d.** provide the greatest potential to generate wealth over the life span.
6. Which of the following relationships accurately describes the role of financial risk-taking and wealth accumulation?
   - **a.** The greater the return required, the greater the risk that must be taken.
   - **b.** The greater the risk taken, the lower the long-term return.
   - **c.** The lower the return, the higher the risk.
   - **d.** The greater the risk taken and the lower the long-term return, the higher the wealth accumulation.
7. What helps explain why some people play the lottery even when they know the odds of winning are astronomically low?
   - **a.** They view playing the lottery as a form of entertainment.
   - **b.** They have a relatively low level of financial literacy.
   - **c.** They prefer low-risk investments.
   - **d.** They have a relatively low level of financial literacy and they view playing the lottery as a form of entertainment.
8. When Todd thinks of investing in the stock market, he equates the action with terms like *loss*, *risk*, and *danger*. This is an example of Todd's:
   - **a.** risk tolerance.
   - **b.** risk preference.
   - **c.** risk perception.
   - **d.** risk capacity.
9. Given a choice, John would like to invest in a safe and secure investment compared to investing in the stock market. This is an example of John's:
   - **a.** risk preference.
   - **b.** risk perception.
   - **c.** risk tolerance.
   - **d.** risk need.

10. Recently, a major fast-food chain saw its sales drop dramatically after the media reported that hundreds of people got sick eating at one location. In fact, sales across the country fell although competing chains saw no change in sales. This can be attributed to:

- **a.** a sudden change in preference for different foods among consumers.
- **b.** a general change in perceptions about the chain's quality of food.
- **c.** a decrease in willingness to eat at fast-food chains among consumers.
- **d.** a increase in firsthand experiences of food quality among consumers.

Adventures in Personal Finance

Short Answer

1. What does the term uncertainty refer to in the context of financial decision making? Make a list of five to seven behaviors in which the outcomes are uncertain.

2. Describe what is meant by risk perception, risk preference, and risk tolerance. What is the relationship among these three concepts?

3. Think about something that you might like to do in the future that involves some risk (such as traveling to an exotic country or trying a new sport). Consider each of the following aspects of the activity. Rate them on a scale of 1 to 10, with 1 being the least risky and 10 being the riskiest.

- **a.** Perception of risk.
- **b.** Preference for the risk.
- **c.** Willingness to take the risk.

Explore

1. **Writing** Write a brief reaction paper to the following statement: If you take recreational risks, you are also more likely to take financial risks. Be sure to address the following questions: Do you agree with this statement? What evidence exists from your personal experience that supports your position? What does the research say about this relationship?

2. **Groupwork** Conduct an Internet search using the phrase "IRTA at University of Missouri." Take the free risk-tolerance questionnaire at this site, making sure to answer all questions honestly based on your current situation. When you finish the questionnaire, you'll receive a risk score. How accurate is the score in your opinion? Talk to others in class about the accuracy of their risk scores.

3. **Writing** Search the Internet to find the odds associated with events that are commonly reported in the news (some of these events may not be financial). Write a brief report showing each event and its corresponding odds of occurrence in a year. Which event was more likely? Is your perception of the likelihood of these events accurate? Did you think any of these events were more or less common than they really are? Be sure to report if the odds matched your initial expectations.

Expanded Learning Activity

Have you heard of Bernie Madoff or **Enron Corporation**? Bernie Madoff stole billions of dollars from investors. Enron was a company that faked its sales and earnings. The company eventually went bankrupt, and investors lost billions of dollars. People remember these things because they are, in fact, quite unusual. However, people come to perceive these events as being representative of all aspects of the financial markets. How does this insight help explain why some people think the stock market is a big gamble? Do some research to see how many large U.S. corporations went bankrupt last year. Also look at how much money people lost to investment fraud compared with how much money is invested in the stock market. If you were giving advice to novice investors, how would you counsel them about their perceptions of companies going out of business and investment advisors stealing their money?

Financial Goals and Time Perspective

LO 1.4 Use your unique time perspective to create SMART financial goals.

If you were in the middle of the wilderness with no cell-phone service, would you know in which direction to go? You would if you had a map and compass as your guides. A map can give you a general idea of what the journey will be like, such as how steep the mountains are, if there are lakes or rivers that you will need to go around or across, and how many miles you will need to travel. However, in the middle of the wilderness, your environment and surroundings will seem very different from the map. You'll only be able to see a small piece of your larger journey. Yet, referencing the map and working with your compass, you'll be able to set short-term targets, such as a pond a few hundred feet away. And, as you achieve each short-term target, you'll set a new one using the map and compass until you reach your destination.

The same can be said about your financial journey. You need a map and compass to set your path and make sure you are staying on target. You can do this by setting SMART financial goals.

Setting SMART Financial Goals

As shown in **Illustration 1.4.1**, a **SMART goal** is:

- **Specific: Documenting the when, what, where, and how aspects of the goal.** For example, it is one thing to say that you want to retire rich. It is better to say that you would like to retire at age 67 in Florida with an annual income of $80,000.
- **Measurable: Attaching a quantifiable standard for achieving the goal.** If you want to retire with an annual income of $80,000, how much do you need in savings to meet this objective? For example, you may need $1,000,000 saved for retirement to generate $80,000 annually in pension and investment income.
- **Attainable: Being realistic about whether you can really achieve the goal.** Although $1 million may seem unrealistic, by breaking it into small monthly savings, you may only need to save a few hundred dollars each month.
- **Relevant: Developing only those financial goals that are the most crucial to improving your financial situation today and in the future.** Planning to buy a mountain home in Montana, when you expect to spend most of your later years enjoying the Florida sunshine and beach life, is not necessarily a relevant goal.
- **Timely: Having the ability to meet the goal in a reasonable amount of time.** It will be difficult to achieve your retirement goal if you start to plan for retirement at age 66.

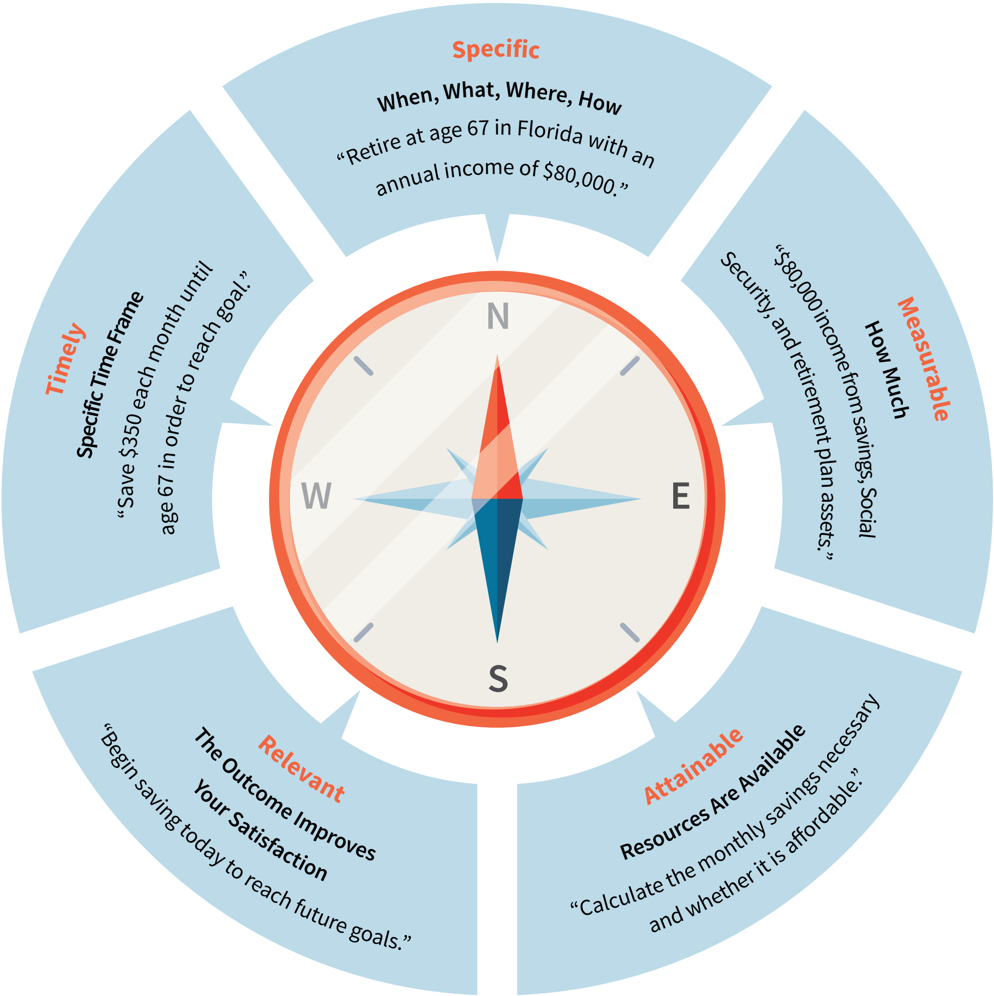
With a solid understanding of how to set SMART goals, you are ready to move forward on your lifetime financial journey. Using the terminology of an explorer, this is similar to getting your map and compass ready for a long hike.

- Your map consists of your **long-term goals**, a big-picture idea of where you want to be financially.
- Your compass is the **short-term goals** and **daily tasks** that represent the immediate actions needed to reach longer-term goals. Sometimes these tasks are called **financial objectives**—things that need to happen along the way toward reaching a financial goal.

In the next section, we'll look more closely at the length of your financial goals, or what financial planners call a goal time horizon.

ILLUSTRATION 1.4.1

Aspects of a SMART Goal



Concepts in Action

Lamar is beginning to think about a vacation in 6 months and is excited about all the alternatives available. He has come up with a few options. He has narrowed his destinations to either Florida or Arizona. If he goes to Florida, he wants to learn how to paddleboard. If he goes to Arizona, he wants to learn to play golf. Lamar is not sure about how to proceed. Choose one of the locations and write SMART goals for Lamar. Be sure to include information that he needs to think about before finalizing his vacation objective.

Solution

Lamar needs to think about how much time he has available for his vacation. He also needs to establish a budget. Assume that he lives in the Midwest. The airfare to either Florida or Arizona is likely to be about the same because both locations attract visitors during the winter months. As such, travel costs will be higher during these months and lower during the summer. Of course, Lamar might decide to drive or take a bus, which could reduce his costs but extend the amount of time on the road.

Based on a travel budget of $900 and a daily budget of $150, a SMART goal for Lamar might look something like the following:

- Specific: Visit Clearwater Beach, Florida, from May 5 to May 12, staying at the Florida Beach Resort. Lamar will fly into Tampa Bay on the morning of May 5 and return the afternoon of May 12.
- Measurable: The total cost is $900 + ($150 × 7) = $900 + $1,050 = $1,950.
- Attainable: This will require saving $325 per month beginning immediately.
- Relevant: Florida is one of Lamar's top travel destination choices.
- Timely: Lamar has 6 months to complete this goal.

Thinking About Time

There are two approaches that can be used when it comes to thinking about the timing of goals:

1. Think about the time it will take to reach a goal. This can be days, months, or years.
2. Think about timing from a psychological perspective (we'll discuss this more in just a bit).

Let's start by looking at the planning aspect or what is known as a goal time horizon.

Goal Time Horizon

When thinking about how you'll earn, spend, and save for the future, it's important to match your financial goals with a realistic **goal time horizon**. Think of this as the time between creating a goal and achieving the goal.

- Let's say that you want to buy a car.
- You've got $1,000 saved, but you'll need an additional $3,000.
- If you give yourself 2 years to save the money, then your goal time horizon is 2 years.

As shown in **Illustration 1.4.2**, time horizons can be short, long, or somewhere in between.

ILLUSTRATION 1.4.2

Goal Time Horizon Guidelines

Goal Time Horizon	Length
Ultra-short term	9 months or less
Short-term	More than 9 months to 2.5 years
Short-intermediate term	More than 2.5 years to 5.0 years
Long-intermediate term	More than 5 years to 10 years
Long-term	More than 10 years

Source: J. E. Grable, K. Archuleta, and D. A. Evans, "Hey Buddy, Do You Have the Correct Time (Horizon)?" *Journal of Financial Service Professionals* (*63*(4), 2009), pp. 49–56.

An important rule comes into play when considering goal time horizons: **If your goal has an ultra-short or short time horizon, then you need to make cautious financial decisions.** Think back to the car savings example.

- It would be foolish to take your $1,000 in savings and invest it in the stock market in hopes of doubling or tripling your money. Why? Because stocks, as we discuss later in this text, can be volatile and generate unexpected losses.
- That is, although stocks can quickly go up in value, they can just as easily, and often do, lose value just as fast.
- Therefore, if you did make the investment and it turned out badly, you would not have enough time remaining to make up the loss.

On the other hand, if you have 10 to 20 years to reach your goal, you can take a lot more risk. The reason is because most investments generally increase in value over the long term, even if they experience short-term losses.

Psychological Time Perspective

For the most part, your goal time horizon is a guide for matching financial tools and techniques to achieving specific results. However, you also need to take a step back and consider another important element of time: your psychological time perspective. As shown in **Illustration 1.4.3**, most people view the world primarily from one of three time perspectives or lenses (see **Helpful Hint**):

HELPFUL HINT

Your specific time perspective colors almost everything that you do each day. Few people even know that they have a time perspective preference!

1. **Past-oriented:** based on memories, whether good or bad. Those who view past events negatively have the most trouble staying on their financial path.
2. **Present-oriented:** based on either (a) a **hedonistic perspective** (doing things for pleasure, the experience, and excitement of the action) or (b) a **fatalistic perspective** (unable to visualize a meaningful future). Understandably, those with a fatalistic outlook sometimes have a hard time reaching their long-term financial goals.
3. **Future-oriented:** based on a calculation of the consequences of actions in terms of a future payoff. Those with a future orientation tend to be very goal-oriented. As such, they might do a better job of managing their personal financial situation in the long run but may miss out on some opportunities along the way.

ILLUSTRATION 1.4.3

Time Perspective Preferences

Time Perspective	**Past**	Positive	Loves thinking about all the fun things that have happened in the past.
		Negative	Fixated on all the bad things that have happened in the past.
	Present	Hedonistic	Living life day-to-day for pleasure.
		Fatalistic	Living for today with no meaningful future.
	Future	Goal Oriented	Willing to forgo pleasures today for happiness in the future.

Source: Adapted from P. G., Zimbardo and J. N. Boyd, "Putting Time in Perspective: A Valid, Reliable Individual-Difference Metric," *Journal of Personality and Social Psychology* (*77*, 1999), pp. 1271–1288.

Although everyone has a dominant time perspective, it is possible to have more than one time perspective. Those who hold a combination of time perspectives are sometimes the best at managing their financial situation.

The Marshmallow Experiment

Imagine a young child sitting alone in a room. A plate sits empty on a table. The door opens and a researcher walks into the room. The researcher is holding a marshmallow. As the researcher places the marshmallow on the plate, she tells the child, "Here is a marshmallow. You may eat this now, but if you can wait until I get back and not eat the marshmallow until then, I will bring you another one and you can have both." The researcher then leaves the room. What do you think might happen?

Before sharing the results of the experiment, a little background is in order. This experiment (called the **marshmallow test**) was first undertaken by Walter Mischel, a Columbia University faculty member, in the 1960s. What was Mischel attempting to do? He was tempting young children with an almost irresistible treat. At the core of the temptation is the notion of

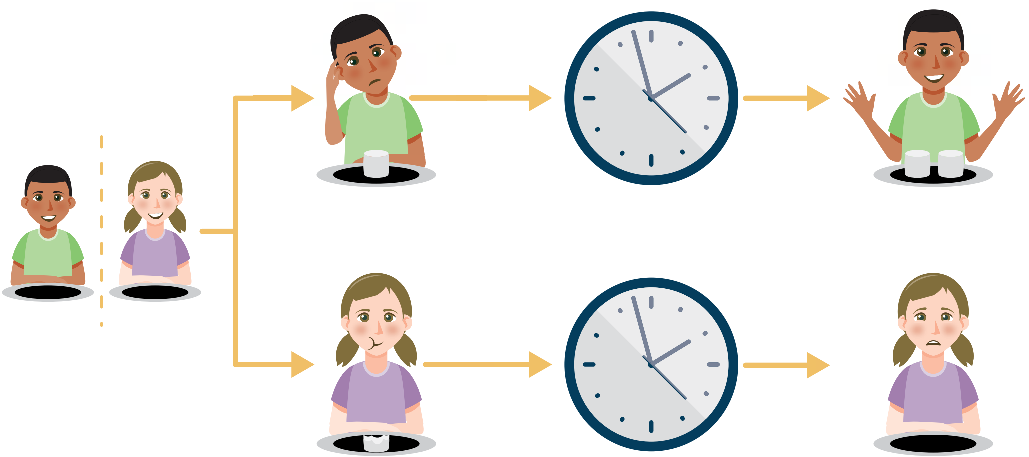
time perspective. Mischel wanted to determine who was willing to forgo immediate rewards for a larger payoff in the future:

- It turns out that two-thirds of the children ate the marshmallow before the researcher returned. Subsequent research indicates that about 70% of Americans—both children and adults—fall prey to temptation. They tend to be impulsive and quick acting.
- Fifteen years after Mischel's innovative study, the children who did not initially eat the marshmallow fared much better. Mischel was startled to find that those with a future time perspective scored, on average, 250 points higher on the SAT college placement test than the impulsive children.
- Those who were future-oriented reported being more content and generally happier than the children who ate the marshmallow immediately (see **Illustration 1.4.4**).
- The same is likely true in relation to personal financial behavior. Those who can wait a bit often earn more and accumulate more wealth.

In later studies, Mischel provided children strategies (for example, sitting on their hands) to help them set goals and visualize how great two marshmallows would be. By doing these things, many more children were able to resist temptation and exhibit future-oriented behaviors.

ILLUSTRATION 1.4.4

Predicting Time Perspectives and Well-Being by Eating Marshmallows



Maintaining Commitment to Your Goals

It may seem obvious, but following through on your plans is essential to accomplishing goals. Your **commitment** and **motivation** to do this largely depends on how important achieving your goal is to you. There are two ways to increase the importance of a goal. You can focus on:

1. **External factors:** Examples include financial bonuses if you reach your goal, or sharing your goal with others, either in person or through social media.
2. **Internal factors:** Examples include self-improvement or visualizing attainment of your goal and what that will mean to you.

Internal factors are often more powerful motivators than external factors and relate to how well you are able to visualize attainment of your goal and what that will mean to you (see **Helpful Hint**). Remember, the "R" in SMART stands for relevant goals, that is, setting financial goals that have high personal importance. As shown in **Illustration 1.4.5**, external and internal factors work together to increase your goal commitment, which leads to goal implementation motivation.

HELPFUL HINT

Clearly identifying a future that is important to you is essential to staying committed to achieving your goals.

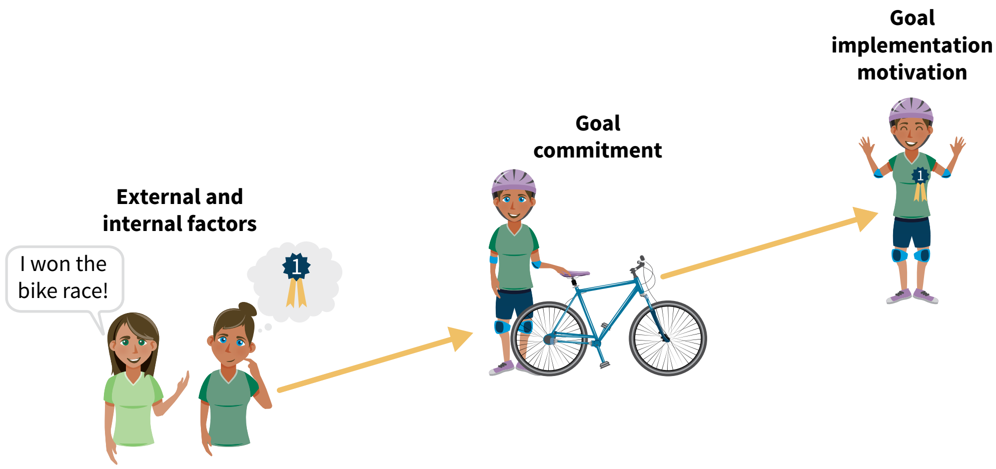


ILLUSTRATION 1.4.5

External and Internal Factors Shaping Goal Commitment and Motivation

Self-Efficacy

You also need to believe that you can achieve your goal. Psychologists refer to this as **self-efficacy**, or how well you believe you can do something. Here are tips to help you achieve your goals:

- Complex goals should be broken down into less complex objectives and tasks.
- By focusing on those things that you can control, you increase goal attainability (the "A" in SMART).
- By achieving several smaller steps, you provide yourself with valuable feedback regarding progress toward achieving your goal.

Feedback on your progress can come from other people, such as a supervisor, friend, or spouse, or it can come from achieving milestones, such as smaller tasks that lead to one larger goal. No matter where you want to be financially, make sure you set goals to get there.

Working Backward to Go Forward

When setting financial goals, sometimes it is best to work backward. Say Jake has a goal of buying his first car in 3 years, a short- to intermediate-term goal. He'll need to save money for a down payment as well as obtain a car loan. How should Jake proceed?

- To maintain commitment to this goal, Jake may find it easier to establish some ultra-short-term objectives, such as those shown in **Illustration 1.4.6**.
- Meeting these objectives will help Jake stay involved and committed to achieving his longer-term goal.
- By setting achievable objectives and working toward achieving them, Jake will improve his circumstances and opportunities for the future.

ILLUSTRATION 1.4.6

Objectives to Help Jake Reach His Goal

Goal	**Purchase a Reliable Car in Three Years**			
Objectives	Work more hours to earn more money	Establish a good credit history	Research the best car to purchase	Save a minimum of 20% from the extra work

End-of-Topic Assessment

Multiple-Choice Questions

1. "I want to retire with $1,000,000 in the bank" represents what element of a SMART goal?

- **a.** Specific.
- **b.** Timely.
- **c.** Attainable.
- **d.** Realistic.

2. Bud is 43 years old. He would like to retire at age 67 and move to the Caribbean. What is Bud's goal time horizon?

- **a.** Short term.
- **b.** Short-intermediate term.
- **c.** Intermediate-long term.
- **d.** Long term.

3. Which of the following is the reason those with a short-term time horizon should be cautious when investing their assets?

- **a.** The tax rate for short-term gains can reduce the value of the assets.
- **b.** If the value of the assets were to fall, there may not be enough time to recoup the loss.
- **c.** It takes too much time to match the risk profile of a portfolio to the risk tolerance of the investor.
- **d.** This rule only applies to older investors who may not live long enough to enjoy the benefits of their investments.

4. Short-term financial goals:

- **a.** help you reach your short-term financial objectives.
- **b.** are designed to help you develop SMART goals.
- **c.** help you reach your long-term goals.
- **d.** are more challenging to meet compared to long-term goals.

5. When asked, Sancho strongly agrees with the following statement: "I often think of what I should have done differently in my life." Given his answer, Sancho most likely holds what type of time perspective?

- **a.** Past.
- **b.** Present.
- **c.** Future.
- **d.** Transcendental.

6. Arnold rarely thinks about his future. He loves to work out and spend time with friends living in the moment. Given his orientation, which of the following best describes Arnold's time orientation?

- **a.** Past-positive.
- **b.** Present-fatalistic.
- **c.** Present-hedonistic.
- **d.** Future-transcendental.

7. When viewing general life outcomes, who is more likely to fare better in the future?

- **a.** Those who resist temptation today.
- **b.** Those who give in to temptation today.
- **c.** Those who resist formalizing goals today.
- **d.** Those who are impulsive and quick acting.

8. Based on findings from the marshmallow test, about what percentage of Americans fall prey to time temptation (i.e., not willing to wait)?

- **a.** 20%.
- **b.** 50%.
- **c.** 70%.
- **d.** 90%.

9. Which of the following is an example of an external motivation factor?

- **a.** Feeling good about yourself.
- **b.** Receiving a bonus.
- **c.** Reaching a dream.
- **d.** Feeling good about yourself, receiving a bonus, and reaching a dream.

10. Which of the following statements is *true*?

- **a.** A person's time orientation can never be changed.
- **b.** Most Americans naturally tend to hold a future time orientation.
- **c.** People who hold a past negative time orientation have a hard time saving for the future.
- **d.** None of the answer choices are true.

Adventures in Personal Finance

Short Answer

1. Thinking of your current financial and life situation, name two long–term financial goals that you would like to achieve. Remember to write each goal using the SMART approach.

2. Match the following time perspectives to its correct description:

a. Past-negative.
b. Past-positive.
c. Present-hedonistic.
d. Present-fatalistic.
e. Future-oriented.

1. You seek out pleasure, good times, and experiences when given the opportunity.
2. You strive to reach your goals, almost at any cost.
3. You let past experiences and emotions upset you and sometimes feel regretful.
4. You would like to take control of your future but feel trapped and unable to change things today.
5. You love to daydream and think about the good things that have already happened to you.

3. Experts suggest that people can adapt time perspectives to different situations. For example, if you are attempting to change from a past-negative to a future-oriented time perspective, you could pay yourself $1 every time you correct a negative thought or regret. Develop a list of other strategies for altering time perspectives.

4. As you think about some of your accomplishments, describe:
   a. How you defined the goal. Did you write the goal down, or was it just clear in your mind?
   b. How challenging this goal was for you to accomplish.
   c. What existing or new skills you needed to achieve this goal.
   d. Why you were motivated to achieve this goal. What was the payoff for you?

Explore

1. **Writing** Not everyone believes that developing goals using the SMART approach is effective. Conduct an Internet search to find videos or websites that argue against SMART goal methods. Based on your findings, write one to two paragraphs discussing the advantages and disadvantages associated with using SMART to formalize goals.

2. Make a list of your 10 highest-priority goals and then search the Internet using "most popular goals." Click on two or three of the most popular sites and then list the top 10 goals shown on these sites. Of all the goals listed, how many are financial in nature? Now compare your list to the compiled list. What are the similarities and differences?

3. **Writing** Our discussion has only touched the tip of the iceberg in terms of time perspective. Visit Dr. Philip Zimbardo's website and complete the full time perspective inventory by typing in "Zimbardo Time Perspective Inventory." Print your final score. Write a brief narrative regarding the accuracy of your score in predicting your time perspective orientation.

Expanded Learning Activity

Writing According to psychological researchers, culture is an important factor that determines someone's time perspective. For example, children raised in households that promote sharing, giving, and strong work values often hold a future-oriented time perspective. On the other hand, children who are raised in households in which immediate gratification is the norm tend to use a present time perspective when making decisions. Other factors include age, gender, income, experience, and knowledge. All these elements point to the positive conclusion that time perspective can change to be more in tune with wealth accumulation, debt reduction, and overall increased financial well-being. Write a brief review of your own childhood, paying special attention to the way you made and were rewarded for choices. When writing your review, comment on whether you would make the same decisions today. If not, what has changed?

Psychology and Financial Well-Being

LO 1.5 Describe strategies to overcome mental biases and improve financial decision making and well-being.

Like most students, you probably have some longer-term assignments, such as papers and projects, that may take several hours to complete. You also likely have other demands on your time, including work and school activities. Have you started working on these assignments yet? For many students, the answer is "no."

The same "no" answer is also true for many people when asked about making decisions regarding their financial future. Yet planning for the future is essential to achieving short-, intermediate-, and long-term financial goals. In this topic, we first explore some reasons people might postpone action. We then present several methods to overcome this tendency and to improve decision-making capabilities, which in turn can help you achieve your financial goals.

Procrastination

Conflict Between the Present and the Future

Procrastination is placing more value on the present at the expense of the future. The conflict between choosing between today and the future is shown in **Illustration 1.5.1**.

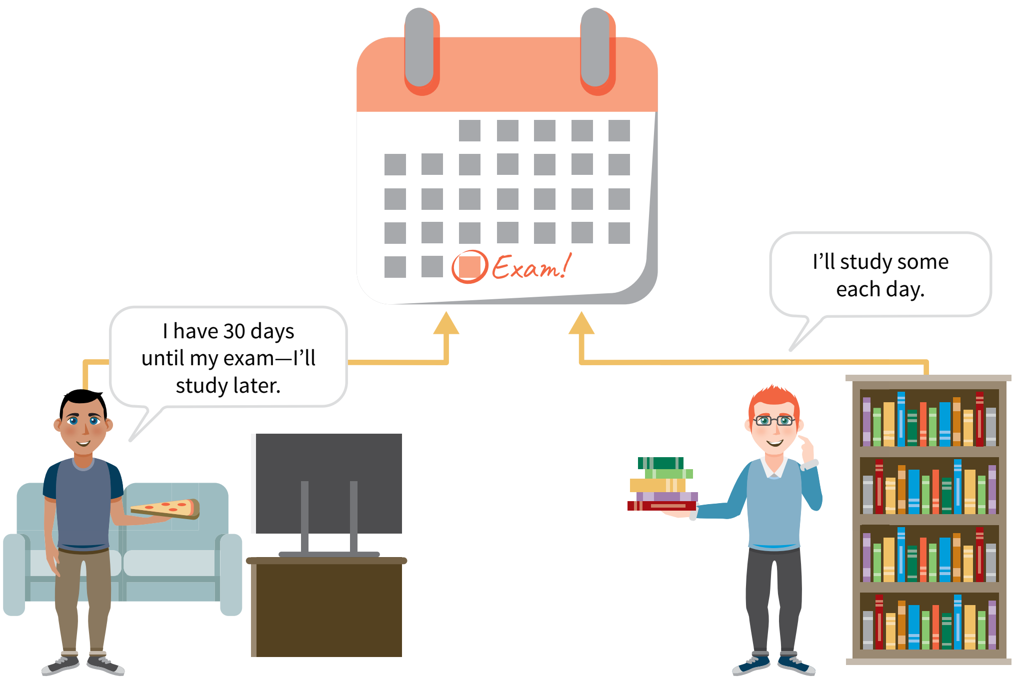
HELPFUL HINT

Although sometimes you might think you can't control how your time is spent, in most situations you actually do have choices.

- Procrastinating the start of a long-term assignment or project, whether at school or at work, is an example of how people often choose to spend their time doing those things that are most comfortable rather than most important.
- This short-run choice is often at odds with someone's long-term best interests (see **Helpful Hint**).
- Long-term outcomes are largely determined by the daily decisions people make.

ILLUSTRATION 1.5.1

Procrastinators Value the Present More than the Future



Hyperbolic Discounting

Procrastination can get so bad that when the time comes to act, some people often choose to put off doing something again and again. This happens because of **hyperbolic discounting**, in which as the time to act nears, the value of future benefits from taking action is perceived to decrease relative to other immediate alternatives. Consider the problem some people have maintaining their weight.

- Many people who want to lose weight struggle to maintain a healthy diet.
- They might pledge to cut down on food later, but when "later" comes they fall back into a pattern of eating impulsively. Often, it is only after a doctor informs them that they must change their food choices or risk serious health issues that they stick to a diet.

As this example illustrates, people tend to undervalue the future, relative to the present, and to procrastinate until some exterior influence, such as a deadline or a doctor's orders, forces them to act.

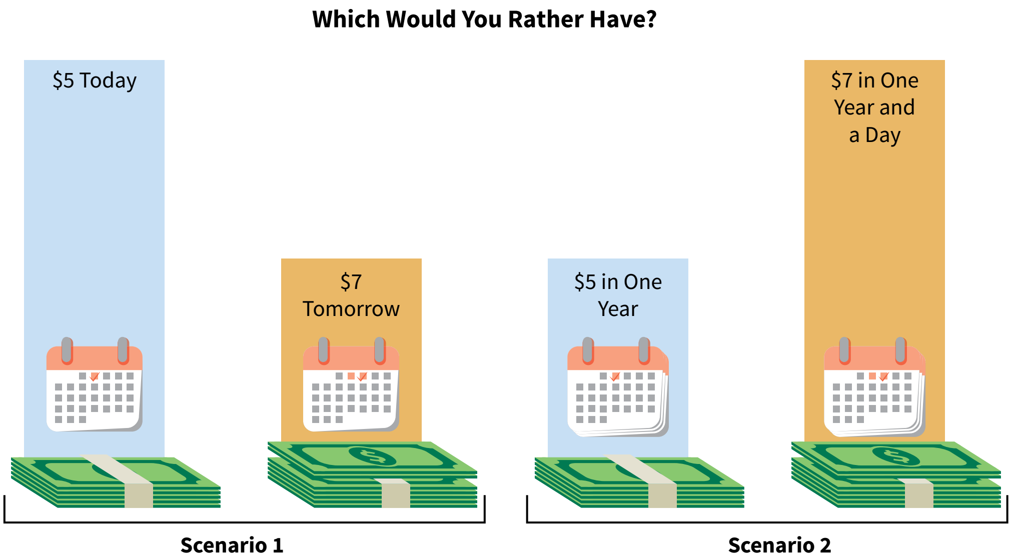
This same philosophy extends to financial decision making. Here's an example from the personal finance world. Let's say that someone offered you the following deal: "You can either have $5 today or $7 tomorrow." What would you take? Remember, there is no correct answer with this type of question. Now assume the same person comes along and asks, "Would you prefer $5 in 1 year or $7 in 1 year and 1 day?" Again, what would you answer?

- When asked nationally, as shown in **Illustration 1.5.2**, 66% of Americans took the $5 in the first situation, but they switched preferences and took the $7 in the second scenario.
- That really is not logical or consistent. **In either case, they would have received an extra $2 just by waiting a day**. Yet most people will not wait one day when faced with a short time horizon, but they will gladly wait the extra day when the time horizon is longer.

The inconsistency in waiting based on how close or far away the reward is (as measured by time) is an example of hyperbolic discounting.

ILLUSTRATION 1.5.2

Hyperbolic Discounting



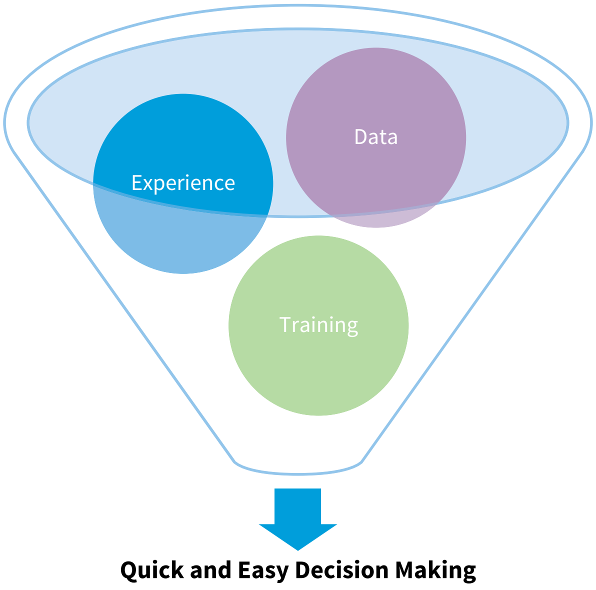
Heuristics

We all make many financial decisions each day. **Behavioral economists** study how people go about making these decisions. It turns out that our brains are wired to be efficient during the decision-making process. To simplify things, our minds use **heuristics** to make decisions more quickly and easily than if we were to labor over every choice. As shown in **Illustration 1.5.3**, heuristics act like a funnel that takes a lot of information and condenses things down to a decision-making shortcut.

- Heuristics are based on past experiences or learning that the mind applies to new situations.
- Most heuristics are automatic and rarely used with forethought.
- Although heuristics can help you make quick decisions, they sometimes lead to problematic choices and outcomes.

ILLUSTRATION 1.5.3

Elements of a Heuristic



Not surprisingly, most heuristics apply directly to financial management decisions. Consider the following examples.

- When making an estimate, always be conservative (don't be overly optimistic).
- Never buy stocks on Monday.
- Shop for a new car at the beginning of the month, but buy the car at the end of the month.

As these examples illustrate, heuristics can either help or hinder you as you move along your financial journey. Let's take a look next at some common heuristics that can lead you astray when making financial decisions: status quo bias, loss aversion, and optimism bias.

Status Quo Bias

HELPFUL HINT

Whenever you hear someone say, "If it isn't broken, don't fix it," they are exhibiting a status quo bias.

The **status quo bias** is your personal preference for keeping things just like they currently are. This bias is prevalent because most people are usually comfortable with their current situation, even when much better options are available (see **Helpful Hint**). Those who fall prey to this heuristic tend to:

- Overemphasize the good aspects of their current situation.

- Underestimate the benefits that come from making a change.
- Fear the possibility of making a wrong decision regarding a new situation.

It is often too easy to get stuck doing the same old thing, even if the past behavior has not been particularly beneficial. As shown in **Illustration 1.5.4**, the status quo bias can lead to procrastination by overvaluing the present situation compared to the gains that could be received from a new opportunity. Over time, the status quo bias can lead to missed opportunities as a result of continued inaction.

ILLUSTRATION 1.5.4

The Status Quo Bias: Valuing What You Currently Have Higher Than What Is Possibly Available

Loss Aversion

Most people dislike losing, especially money. In other words, people tend to be **loss-averse**.

- Research indicates that for individuals to be indifferent between the equal likelihood of gains and losses, the potential gains need to be nearly **twice** that of the potential losses. That means that you would need to have the same possibility of winning an additional $1,000 as you would of losing $500.
- Behavioral economists have concluded that if you lose, your emotional pain—your feelings of loss and the regret associated with making a bad decision—will also be two times as great as the joy of winning, as shown in **Illustration 1.5.5**.

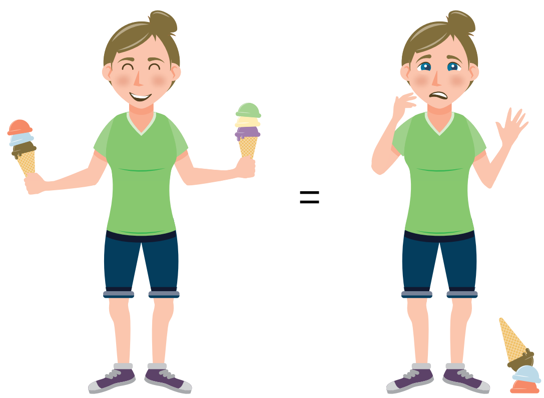


ILLUSTRATION 1.5.5

Pain of Losses Are Twice as Intense Compared to Joy of Gains

As a result, people generally focus much of their attention on avoiding losses because the joy of a gain is smothered by the pain of a loss. The fear of loss also helps explain the status quo bias.

How does this loss-aversion heuristic translate to financial decisions? Consider that some investments over the long run, say, 20 years, have a consistent track record of superior

performance. However, these same investments, over the short run, might gain and lose value regularly. People who are loss-averse tend to focus on these short-term fluctuations rather than on the 20-year payoff. Over time, they will miss out on benefiting from long-term gains, even when they have the time and resources to deal with a short-term loss.

Optimism Bias

Although people are generally loss-averse, there are others who think that they will rarely, if ever, experience painful losses during their lifetime. These people suffer from an **optimism bias**.

- Most people are generally optimistic and believe that they are, at a minimum, above average in most daily activities.
- There is nothing wrong with being optimistic, unless it blinds you to reality. Being overly optimistic can lead some people to discount the risks associated with a decision.

ILLUSTRATION 1.5.6

Being Overly Optimistic Can Lead to Overconfidence and Poor Performance

Confirmation Bias

Say Jake buys stock in a company without doing any research. If the stock rises in value, Jake might attribute the success of the investment to his stock-picking skill rather than luck. When this happens, Jake may then go on to find reasons to confirm the assessment of his stock-selection "skill" and ignore any evidence that his investment success was based on pure chance. This is known as a **confirmatory bias**, which leads to overconfidence in future decisions. Thus, lucky novice investors like Jake can quickly become overly optimistic and overconfident, which can be a devastating combination for long-term investment success.

Using Heuristics as a Decision-Making Tool

The Decision-Making Process

When it comes to making any type of major decision—particularly a financial decision—financial planning experts recommend that you use a formal decision-making process, such as the one shown in **Illustration 1.5.7**:

1. **Identify the problem or issue.** For example, say you want to rent a new apartment that is closer to school.
2. **Gather appropriate facts and data about the situation.** You should visit available apartments and make notes regarding the rent, utilities, and other expenses involved with each option.
3. **Analyze the data you have collected.** You should evaluate how each option adds up in terms of, for example, location and price.
4. **List the viable alternatives and select the best one.** It's also important at this point in the process to determine acceptable alternatives. It might turn out that the place you really want to rent has already been taken. If this were to happen, you need a good back-up plan.
5. **Implement the decision.** You need to make the commitment and sign the lease.
6. **Monitor outcomes.** If your apartment meets your expectations, you won't need to do anything. But if your landlord refuses to fix the plumbing or other things change, you'll need to start the apartment search over again.

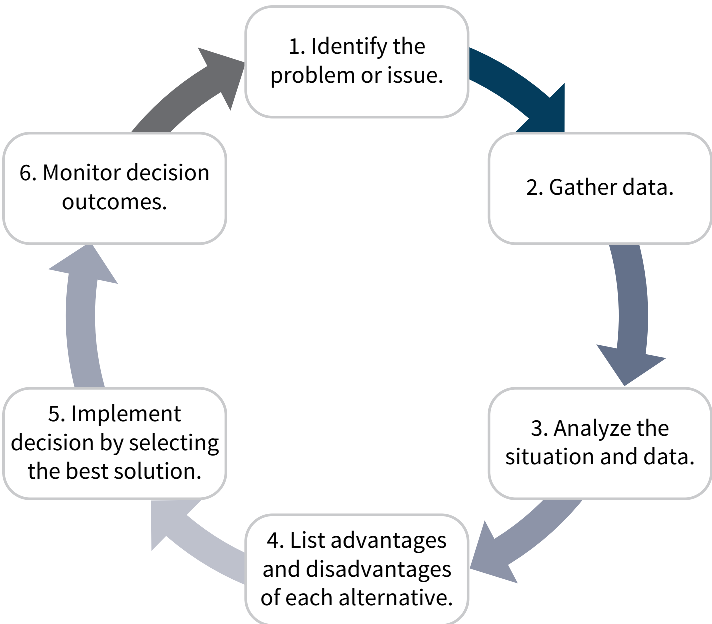


ILLUSTRATION 1.5.7

A Decision-Making Process

Heuristics for Improved Financial Decision Making

You'll find that the use of heuristics can aid you through this decision-making process (see **Helpful Hint**). **Illustration 1.5.8** presents three heuristics and how you can use them today.

Let's see how heuristics and behavioral biases can come into play on a daily basis. Your friend, Mie-Yun, recently accepted a new job. Although her employer offers a retirement savings plan, she is unsure if she should contribute money to the plan. Mie-Yun needs most of her income to pay for immediate needs, like rent, car payments, food, and other expenses. If Mie-Yun were to agree to begin saving, how can she be sure she will stick to the

HELPFUL HINT

Although it is true that overreliance on heuristics can lead to bad outcomes, heuristics can also serve as valuable tools to help you along your financial journey by improving your decision making.

ILLUSTRATION 1.5.8

Heuristic Techniques for Making Wise Financial Decisions

Precommit to Decisions	Automate Good Decisions	Set Clear Goals
Use deadlines	Save automatically through your employer	Define where you want to be financially
Have others hold you accountable	Pay bills automatically	Begin working toward your goals
Reduce procrastination		Focus on small steps

plan? Mie-Yun can use some of the techniques described previously as a way to commit to her decision.

- When Mie-Yun receives a raise, she can ask her employer to automatically save half of her raise for a contribution to her retirement plan. If this agreement is automatically enforced each time she receives a raise, then Mie-Yun is benefitting from the status quo bias, which helps people who precommit to a transaction actually implement the decision. People rarely end up changing the automated savings agreement.
- You could encourage Mie-Yun to visualize her future self in retirement. Then, you could ask how much money she will likely need at that point. By setting a goal and attaching a cost to it, it will be easier for Mie-Yun to stay committed.

Many businesses also use behavioral heuristics to their advantage, specifically the status quo bias. Here are two examples:

1. Businesses know that consumers will not pay as much attention to small rising costs over time. So rather than raise prices once per year, businesses raise prices throughout the year.
2. Banks, Internet providers, and cell-phone companies offer "teaser" rates or special offers to bring in new customers and then raise the rates later, knowing that many customers will not switch service providers.

Now that you know about heuristics and behavioral biases, you can defend yourself from falling victim to these tactics! You can even begin to use heuristics to your advantage.

Concepts in Action

Axel works for a small but growing company. The firm offers each employee the option to contribute to a retirement plan. The nice thing about the plan is that each dollar contributed by an employee is matched by the employer, up to a maximum match of 6%. Unfortunately, Axel does not have the cash flow to make contributions right now. Rent is expensive, and he is still paying off some high-interest debt. However, next January, Axel is confident that he can start contributing at least 6% of his pay into the plan. How might you encourage Axel to follow through and contribute to the plan?

Solution

You can encourage Axel to precommit to the plan by having him sign up today and requesting his employer to begin deducting contributions from his pay on January 1. By precommitting, he will probably not even notice the deduction from his paycheck when it starts.

Another alternative is to use Axel's risk aversion to prompt action. Every day that he postpones a contribution, Axel loses money because he is not receiving the employer match. Essentially, the employer match of 6% means that Axel can earn a risk-free rate of return equal to 100% just by contributing up to 6% of his own pay. When framed as a loss, Axel may be more likely to find money to contribute.

End-of-Topic Assessment

Multiple-Choice Questions

1. Melinda can take $500 today, or she can wait 1 year and receive $550. The good news is that Melinda does not need the money, so either way the money is a bonus. If she takes the money today, she'll put it in the bank and receive a 3% rate of return (so she would have a total of $515 a year from now). If Melinda does, in fact, take the $500 today, you could say that:

- **a.** she is using hyperbolic discounting.
- **b.** she has an optimism bias.
- **c.** she feels that the likelihood of getting the full $550 is less than getting a guaranteed $515.
- **d.** she has a status quo bias.

2. Which of the following is an example of a heuristic?

- **a.** Two plus two equals four.
- **b.** Never buy stocks on a Monday.
- **c.** Income minus expenses equals savings.
- **d.** Both two plus two equals four and income minus expenses equals savings are heuristics.

3. Mary sees no reason to change if what she is doing has worked in the past. Given her perspective, Mary may be exhibiting a(n):

- **a.** loss-aversion bias.
- **b.** optimism bias.
- **c.** status quo bias.
- **d.** discounting bias.

4. Some firms entice consumers into long-term contracts using low introductory rates. Once the initial contract term has ended, the firm increases the cost of the service. Firms know that few consumers leave when the prices increase. These firms are relying on what behavioral economics bias?

- **a.** Overconfidence.
- **b.** Optimism.
- **c.** Status quo.
- **d.** Loss aversion.

5. Jerry recently earned $200 on an investment. Unfortunately, the investment fell in value, and he lost $200. Afterward, Jerry felt miserable. He hated losing the money much more than he enjoyed seeing the investment grow. Jerry's experience is an example of:

- **a.** discounting.
- **b.** loss aversion.
- **c.** behavioral economics.
- **d.** heuristic meditation.

6. Swarn is a risk-taker. His core life philosophy is that nothing bad can happen to him. When he thinks back over his life, he can't remember any serious negative events. When he looks ahead, he simply can't imagine a painful loss occurring to him. Swarn likely suffers from a(n):

- **a.** optimism bias.
- **b.** loss-aversion bias.
- **c.** cognitive evaluation bias.
- **d.** future discounting bias.

7. Someone who erroneously attributes outcomes to skill rather than chance, while ignoring indications that would undermine perceptions of skill, is prone to:

- **a.** status quo bias.
- **b.** optimism bias.
- **c.** confirmatory bias.
- **d.** hyperbolic discounting.

8. Creating deadlines for yourself is an example of what type of decision-making strategy?

- **a.** Visualizing clear goals.
- **b.** Precommitting to decisions.
- **c.** Automating good decisions.
- **d.** Confirmation bias.

9. Having bills automatically paid so you are never late when making a payment is an example of:

- **a.** setting clear goals.
- **b.** automating good decisions.
- **c.** precommitting to decisions.
- **d.** automating good decisions and precommitting to decisions.

10. Your friend Lucia is a procrastinator. How can you best help her overcome this weakness?

- **I.** Create deadlines.
- **II.** Encourage hyperbolic discounting.
- **III.** Strengthen her confirmatory bias.
    - **a.** I only.
    - **b.** III only.
    - **c.** I and II only.
    - **d.** II and III only.

Adventures in Personal Finance

Short Answer

1. Match the following terms with the appropriate definition.

a. Hyperbolic discounting.	**1.** The tendency for people to fail to focus on gains because they seek to escape losses.
b. Optimism bias.	**2.** An inconsistent preference across time leading to procrastination.
c. Loss aversion.	**3.** A preference for things to remain the way they are.
d. Status quo bias.	**4.** Erroneously attributing outcomes to skill rather than chance while ignoring indications that would undermine perceptions of skill.
e. Confirmatory bias.	**5.** A situation that results in a significant majority of people thinking that only good things will happen to them.

2. Thinking about your current situation, identify three tasks about which you are currently procrastinating. Next, identify a specific strategy for each task that you can use to take corrective action.

3. Overconfidence and optimism biases are generally most easily seen in others rather than in ourselves. However, self-awareness of these personality characteristics improves our ability to achieve goals. Thinking over the past, can you identify instances where overconfidence or optimism bias led you to make unwise decisions or to take too much risk?

4. When situations are viewed with a short-term perspective (something economists call **myopically**), individuals often fail to see the consequences of their choices. However, imagine if your view of time extends well beyond the present and into weeks, months, or even years into the future. Would this alone change any of your financial decisions? In addition, how would a clear picture of your future financial goals influence your choices? Which do you feel would be more important in achieving your financial goals: a long-term goal or a clear picture of the future?

Explore

1. **Writing** Search the **YouTube** website for “behavioral biases in decision making” and then select a video to watch. After watching it, describe your reaction to it in one to two paragraphs. Be sure to note whether you were surprised by what you did, and did not, see. Also, comment on how well the video illustrates the tendency of people to be fooled by behavioral biases.

2. **Writing** Many people pay late fees simply because they forget to pay their bills. Go through your current recurring bills, such as those for utilities, phone, or loans. Check to see if any of these companies offer electronic billing. Now, check with your bank (or credit union) and see if it offers electronic bill-payment services. Through this service, you may be able to have the company bill you, and then your bank will automatically pay the bill on time each month. By automating your bill-payment method, you could potentially avoid late fees and improve your finances. Plus, you are saving on postage. Write a short summary about your findings and if you will (or why you won’t) begin to use these services.

Expanded Learning Activity

Writing Behavioral economic concepts apply to many areas of daily life, including marketing, diet, and exercise. Conduct an analysis of ways government and business use behavioral economic techniques to change your personal financial management behaviors. Write a brief summary of your findings. Based on your research, create a “to-do” list for saving. Be sure to share with your instructor and other students any techniques that you find unethical or manipulative.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

1.1 Describe how your financial knowledge, experience, risk tolerance, and feelings of control influence the way you view the financial world. Your attitudes, expectations, and risk tolerance influence the way you view financial issues and concerns; when used purposely, these same factors can help you become more financially proficient. As you progress in your own financial journey, be sure to periodically evaluate your risk tolerance, attitudes about money, perceptions, preferences, and expectations regarding the future to make sure that you are progressing toward your goals.

1.2 Explain how your human and social capital relate to your financial well-being. Learning about money-management topics and using that information is essential to improving your financial well-being today and in the future. As you gain financial knowledge, your financial capabilities will increase. This, in turn, will enhance your ability to navigate the financial marketplace with confidence. When you invest in education and training, you are building a skill set that can be converted to income and wealth; it is also important not to neglect building strong social networks if your goal is to achieve financial well-being. When combined with your increasing financial knowledge, financial capabilities, and changes in expectations, human and social capital can help you stay on your financial path toward goal achievement.

1.3 Discuss how financial risk tolerance relates to financial goal achievement. One fundamental principle of personal finance is that there is a direct positive association between risk and returns. As such, you must be willing to take some risk to accumulate wealth over your lifetime. This rule implies that in cases in which you want or need to earn higher returns, you must be willing to take additional financial risk. As you gain financial knowledge and improve your financial capabilities, you will notice that your risk tolerance also increases. This will allow you to take greater calculated risks in the future.

1.4 Use your unique time perspective to create SMART financial goals. Before you begin or fast-forward your financial journey, you should know clearly where you are headed; developing meaningful financial goals can be enhanced by using the SMART process of goal formation. A SMART goal is **s**pecific, **m**easurable, **a**ttainable, **r**ealistic, and **t**imely. In addition, it is important to document the time it will take to achieve a goal. Although a goal time horizon can be measured objectively, your internal time perspective can also influence goal formation. As noted, those who have a future time orientation tend to accumulate wealth faster than others.

1.5 Describe strategies to overcome mental biases and improve financial decision making and well-being. Nearly everyone is susceptible to cognitive biases that can shortcut rational decision making. Being able to identify and transform these biases into financial-management tools is an important skill. Once you learn to identify biases in others as well as in yourself, you will start making better short- and long-term financial decisions.

Continuing Case: Tarek's Financial Journey

In every chapter, you will have an opportunity to assist Tarek as he begins his financial journey. Let's meet Tarek and learn a bit about his current financial situation.

Tarek, age 26, is single. He is in a committed relationship. After graduating from college, he moved to the Midwest to begin his career. His interest in learning about personal finance topics and money management has increased over the past few months. Like many people his age, he went through school with little interest in these things. Now that he is working and thinking about his future, he wants to make sure that he is making the best financial decisions. Let's help Tarek by learning more about his interior financial attitudes and expectations.

When Tarek heard about the idea of time perspectives, he was curious about his own preferences. He found the following questions online.[1] He knew there were no correct or incorrect responses.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I believe that getting together with my friends to party is one of life's important pleasures.				
2. I believe that a person's day should be planned ahead each morning.				
3. I often think of what I should have done differently in my life.				

[1]These and similar questions can be found in M. D'Alessio, V. D. P. Guarino, and P. G. Zimbardo, "Testing Zimbardo's Stanford Time Perspective Inventory (ZSTPI)—Short Form: An Italian Study," *Time & Society* (Vol. 12, February 3, 2003), pp. 333–347. See also P. Zimbardo and J. Boyd, "Putting Time in Perspective: A Valid, Reliable Individual-Difference Metric," *The Journal of Personality and Social Psychology* (Vol. 77, 1999), pp. 1271–1288.

Instructions

a. Let's say that Tarek answers the first question as disagree, the second question as strongly agree, and the third question as strongly disagree. Based on his answers what is his time perspective?

b. What does Tarek's time perspective indicate about his potential money-management ability?

c. Tarek's girlfriend, Samantha, is thinking about going on to earn a master's degree in history from an Ivy League university. Samantha loves everything there is to know about ancient Middle Eastern mystic philosophy. She found a scholar who is exploring this topic from a historical perspective. If Samantha decides to go back to school, she anticipates paying 2 years of tuition, room, food, books, and other fees equal to $63,000 yearly. She plans to borrow most of this amount. She would need to quit her current job, which will lead to a loss of income of $33,000 per year. She believes that having a master's degree will allow her to teach high school history, which should increase her annual income to $35,000 per year. Based on this information, what is Samantha's payback period?

d. Based on your analysis from part (c), does it make economic sense for Samantha to go back to school at this time? What might be an alternative?

Calculating the Cost of Life's Financial Journey

Researchers at some of the nation's leading universities have been studying financial literacy for years. Results from their work provide interesting insights into the financial capabilities of the average American. Their findings are a bit sad. The average American is, well, basically a "C" student when it comes to financial issues—and we are talking about adults!

Instructions

The following questions are those that researchers asked survey participants to think about. See if you can beat the national averages for correct and incorrect responses!

a. If the chance of getting a disease is 10%, how many people out of 1,000 would be expected to get the disease?

b. If five people all have the winning number in the lottery and the prize is $2 million, how much will each of them get?

c. Let's say you have $200 in a savings account. The account earns 10% interest per year. How much would you have in the account at the end of 2 years?

Next, try these three questions:[2]

d. Suppose you had $100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than $102, exactly $102, or less than $102?

e. Imagine that the interest rate on your savings account is 1% per year and inflation is 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?

f. Do you think that the following statement is true or false? "Buying a single company stock usually provides a safer return than a stock mutual fund."

[2]A. Lusardi and O. S. Mitchell, "Financial Literacy and Planning: Implications for Retirement Wellbeing," *Working Paper*, Pension Research Council (Wharton School, University of Pennsylvania, 2006).

Planning for the Future

Edmond, age 33, is thinking about his financial future. After reading the chapter material, he has decided to focus his efforts on reaching the following three financial goals:

1. Retire at age 55.
2. Purchase a new pickup truck in 2 years to replace his late-model car.
3. Go back to school in 5 years and obtain an MBA.

Instructions

Based on this information, do the following:

a. Categorize each goal based on the goal time horizon guidelines presented in the chapter.

b. Rank the goals in terms of funding importance.

c. Choose one of Edmond's three goals. Using the following table, help Edmond clearly describe the goal using the SMART procedure; be as detailed as possible when providing guidance on each element.

Specific	Measurable	Attainable	Realistic	Timely

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER 2

Tools for Your Financial Journey

hocus-focus/E+/GettyImages

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

2.1 Discuss the role of compound interest in managing your finances.

2.2 Identify how time value of money concepts affect financial goals and decisions.

2.3 Calculate the effect of time and interest on financial decisions pertaining to planning, investing, and borrowing.

2.4 Describe how to use a balance sheet as a financial-management tool to track changes in assets, liabilities, and net worth.

2.5 Explain how to use a personal budget to track and forecast cash flow to achieve financial goals.

2.6 Describe how to create a personal financial plan.

In this chapter, we introduce concepts related to what we are calling *exterior finance*. In contrast to *interior finance*, which refers to your knowledge, attitudes, perceptions, and abilities, **exterior finance** refers to the observable actions you take with money and the associated outcomes, such as your loan payment amounts, savings rates, cash flow management, and your net worth. Specifically, you will learn why it is important to make your money work for you, how to calculate present and future values using time value of money techniques, and how to track your financial progress using a balance sheet and budget. If you have ever wondered how you'll be able to save a million dollars or how loan payments are determined, then the tools introduced in this chapter will help you answer these questions.

Two important takeaways emerge from this chapter. First, you'll learn that having a dollar today is worth more than a having a dollar in the future. Keeping this in mind will help you make your money work for you. This is, essentially, the foundation of what Albert Einstein called the Eighth Wonder of the World: compound interest. The second thing you'll learn is that you have to know your current financial standing so that you can make a realistic plan to meet your future financial goals. You're going to be introduced to several tools that will help you along your financial journey: a balance sheet, which helps you keep track of your assets (things you own) and your liabilities (money you owe to others); a budget, which is used to anticipate and track how much you will earn and spend in a given period of time (typically a month); and an income and expense statement, which shows how much you actually earned and spent during a set period of time (same as the budget time period). Financial ratios can then be calculated

using the information in these documents to determine progress toward your goals. We will also present benchmarks to help you gauge where you are currently compared to what financial planners recommend.

What's in Your Financial Toolbox?

Before moving into the chapter, let's take a step back and think about what you're about to learn. We understand that formulas, financial math, and data tracking can be intimidating. Our goal is to help you overcome any fears you might have regarding formulas and math-oriented calculations. The concepts in this chapter are practical. For example, you can use the tools you'll learn about when buying a car or house, taking out a student loan, or calculating how wealthy you are now as well as in the future. The tools presented in this chapter will help you manage your financial resources wisely during your lifetime financial journey.

Let's start by getting a baseline measure of your exterior finance knowledge. The instructions are easy: just answer honestly.

What's Your Exterior Finance Knowledge?

1. How much should a young person save from each and every paycheck?

a. 4%. **c.** 10%.
b. 7%. **d.** 12%.

2. When you borrow money, you should compare loan offers using the:

a. APY. **c.** Rule of 72.
b. APR. **d.** monthly payment.

3. In order to calculate the profit or loss on the sale of an asset, you must know the price the asset sold for and the:

a. sales tax on the asset. **c.** the amount you paid for the property.
b. length of time you owned the asset. **d.** the interest you can earn from savings.

4. The tool used to estimate your net worth is called a:

a. balance sheet. **c.** budget.
b. cash flow statement. **d.** financial ratio.

5. To accumulate wealth, you should strive to be a(n):

a. lender. **c.** coupon clipper.
b. investor. **d.** borrower.

Let's see how you did. Here are the correct responses to the questions: 1. d, 2. b, 3. c, 4. a, and 5. b. Add up the number of your correct answers.

If you answered three or more questions correctly, you already have a solid understanding of some of the concepts and tools you'll need during your lifetime financial journey. If you guessed at the questions or missed more than you expected, don't worry. You'll find the material in this chapter particularly helpful.

The Power of Compound Growth

LO 2.1 Discuss the role of compound interest in managing your finances.

During your lifetime financial journey, you will want your money working for you. And to make sure this is happening, you need to understand calculations that you'll use to plan and track your financial progress. In this topic, we discuss the principle of compound growth, which is a powerful concept you can use to reach your financial goals. You will also learn how to calculate interest, which will help you better understand both the benefit of saving and investing, as well as the cost of borrowing money.

You might be asking yourself, how do I get my money working for me? First, you have to earn money. Second, you need to spend less than you earn. Third, you must actively save and invest wisely a portion of every dollar you earn. Only then can you benefit from the power of compound growth.

Overview of Interest

Interest is at the root of making your money work for you. **Interest** is the price paid for the use of money.

Paying Interest on Borrowed Money

When you borrow money, you pay it back plus interest.

- If you borrow $10,000 from a bank to buy a car and then make your monthly loan payment, a portion goes to pay back what you originally borrowed (this is called the loan **principal**), and another portion goes to pay interest to the bank as the cost of borrowing the money.
- If the bank has some concern about whether you will pay back the money borrowed—based on your financial behavior—the bank may charge a much higher interest rate to compensate for the uncertainty—or risk—that the loan will not be repaid.
- If you have a stable, high-income job, you may pay less in interest than someone who has a lower unsteady income because lenders may view you as a lower borrowing risk and therefore may change a lower interest rate.
- The purpose of the loan can also influence the amount of interest paid. If you borrow money for a vacation, you may pay a higher interest rate than if you take out a loan to buy a new house or car.

Although almost everyone borrows money at some point and pays interest, an easy way to get your money working for you is to lend it to others to generate interest for yourself. You can start to do this now through savings.

Receiving Interest on Savings

Rather than pay a bank interest for a loan, why not let others pay you? The more you can earn on your savings, the more wealth you can accumulate over your lifetime (see **Helpful Hint**). Consider **Illustration 2.1.1**. In this example, assume Emma saves $2,000 per year for 20 years. This is her contribution. The interest, which in this case is based on earning 10% each year (annually), is shown as the amount above the fixed contribution. During the first few years, the interest is minimal, but by year 20, the amount of interest earned is quite large. Here's what happened:

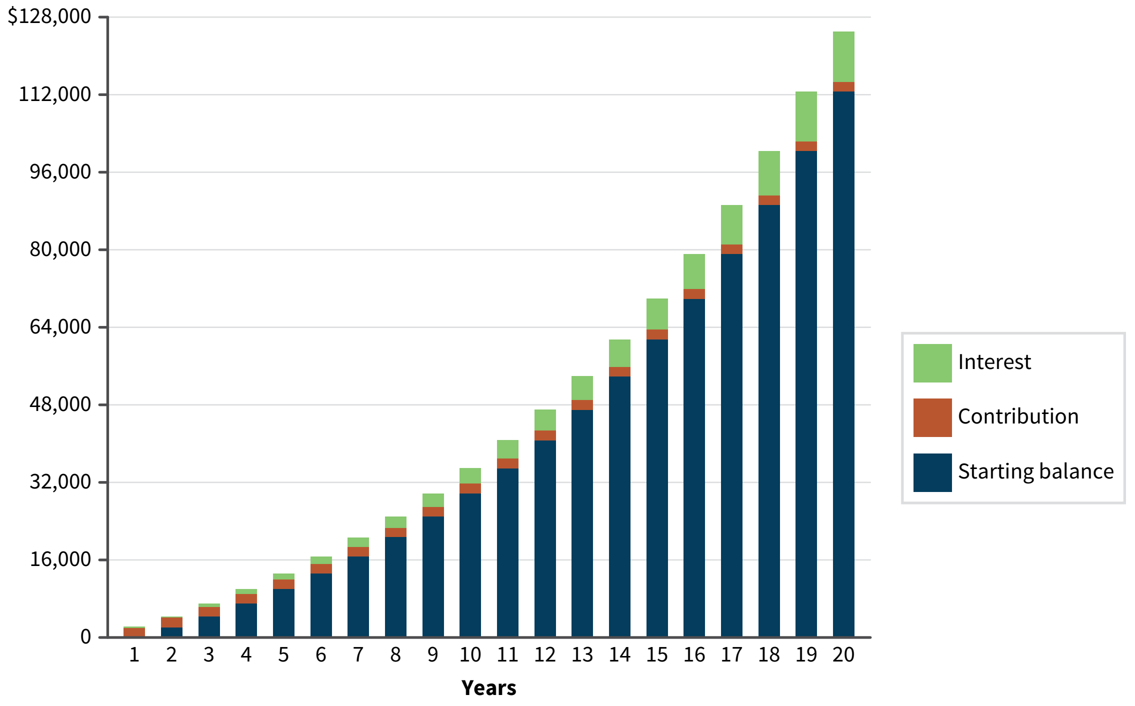
- Emma contributed $40,000 over the 20-year period.
- She earned a total of $86,005 in interest during the 20-year period.
- At the end of 20 years, Emma had $125,005 in wealth!

HELPFUL HINT

For simplicity, we are going to focus only on interest earned on savings in this discussion. Keep in mind, however, that there are other investments that generate income and wealth in forms other than interest.

ILLUSTRATION 2.1.1

The Power of Saving and Earning Interest



Compound Growth

Money grows through the principle of **compound growth**, which means essentially that investment gains earned in the first time period are put to work in the second time period to earn additional investment returns. That is what is shown in Illustration 2.1.1.

If this sounds a little complicated, it might help to think of your money like rabbits.

- Adult rabbits grow the population by having baby rabbits.
- In a relatively short period of time, these baby rabbits start producing more babies.
- All the while, the original adult rabbits are continuing to have more baby rabbits as well.
- Thus, the babies in the rabbit population (the interest), as well as the original adult rabbits (the original amount invested), continue to grow the rabbit population.

Rate of Compound Growth

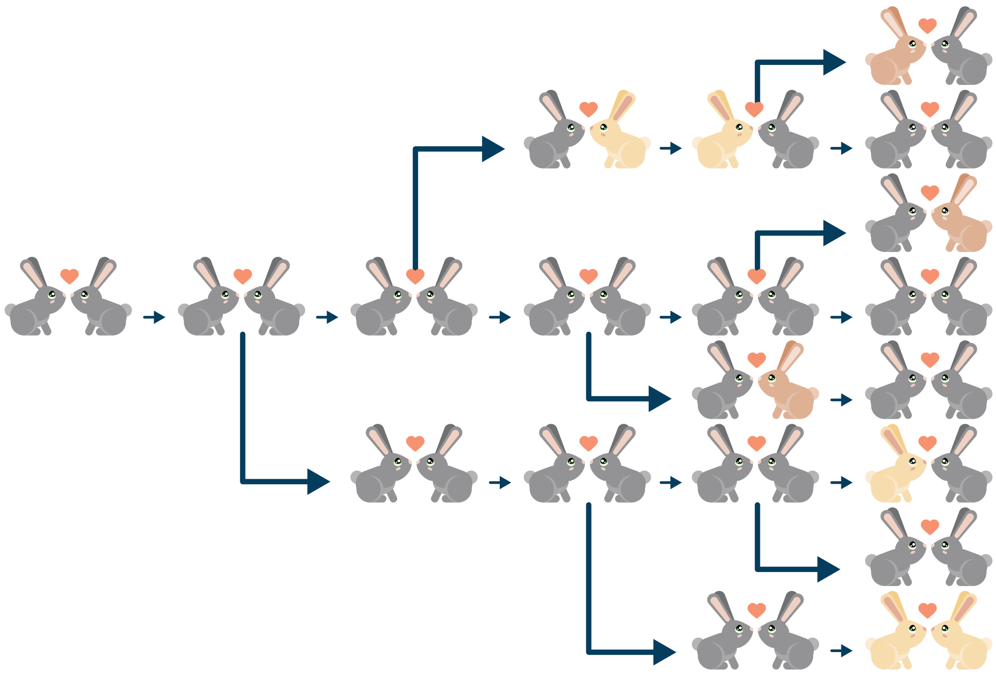
How fast will your money grow? Hopefully as fast the rabbit population! As shown in **Illustration 2.1.2**, growth can occur very quickly if the rate of return (or interest rate) is high. For example, if the rabbit population doubles every two months (in other words, the interest rate is 100% over two months), two rabbits will grow to over 4 billion in just over 5 years!

Something similar happened in Australia.

- In 1859, 24 European rabbits were released into the wild in Australia.
- By 1920, the estimated rabbit population was 10 billion, despite the country's vigorous efforts to control the rabbit population.

Now that's the power of compound growth!

ILLUSTRATION 2.1.2 **The Power of Compounding**



Initially, the amount of interest and investment returns your money earns may seem small. Compound growth starts out slowly. Over time, however, the amount of interest you earn starts to gain momentum. The longer you let your money work for you and the higher the interest rate earned, the more money you will accumulate. In other words, you want to apply the following three rules:

1. The longer you let your money grow, the more you will have in the future (assuming the same interest rate).
2. The more interest you earn, the more you will accumulate over time.
3. The higher the interest rate you want or need to earn, the more calculated (that is, well thought-out) risk you must take.

Illustration 2.1.3 shows how $1,000 invested at different interest rates will grow over a 40-year period. As you can see, the higher the interest earned, the greater your wealth will be in the future.

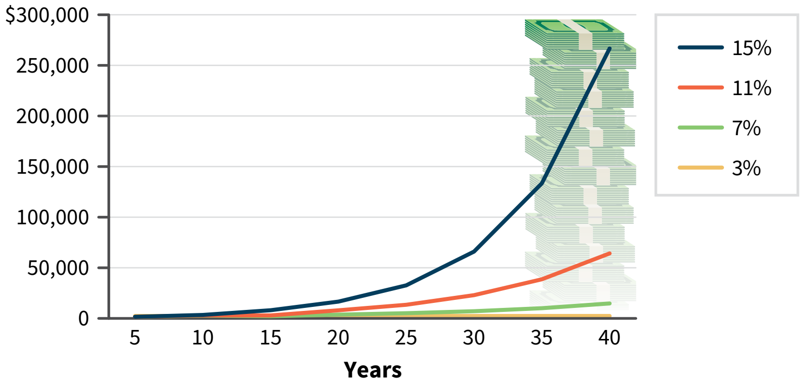


ILLUSTRATION 2.1.3
The Power of Compound Interest

Risk and Return

When you deposit money into a savings account at a bank or credit union, in essence, you are lending the money to that financial institution.

- The bank agrees to pay you interest for the use of your money.
- You are making a very low-risk loan because you can get your money back virtually at any time.
- Your **savings deposit**, or the money you loaned to the bank, is protected against loss. The **Federal Deposit Insurance Corporation** and the **National Credit Union Administration** protect your deposit up to $250,000.

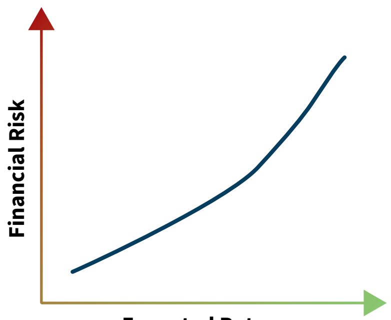
HELPFUL HINT

Always keep in mind that no matter what interest rate you *could* earn on your savings or investments, if you do not have any money to save or invest, your return will be zero.

Because a savings account is a low-risk loan, the interest rate that your money earns will also be very low. **Illustration 2.1.4** depicts the relationship between risk and return (see **Helpful Hint**). As the amount of calculated financial risk increases, so does the expected return on the investment.

ILLUSTRATION 2.1.4

The Association Between Risk and Return



APR and APY Formulas

Interest rates charged and earned are reported in two ways: the annual percentage rate (APR) and the annual percentage yield (APY).

Annual Percentage Rate (APR)

If interest is deposited (when you are saving money) or charged (when you are borrowing money) to your account more frequently than once per year, then the **annual percentage rate (APR)** becomes the annual sum of the periodic interest rates applied to the account, without considering the effect of compound growth. The formula to calculate this is:

$$\textbf{APR} = \textbf{Periodic Interest Rate} \times \textbf{Number of Periods in the Year}$$

For example, say your bank pays you 0.2% interest monthly on your savings:

- The APR is 0.2% per month × 12 months = 2.4% per year.
- However, interest credited to your savings account at the end of the first month—and left in the account—will earn more interest for the remaining 11 months of the year.
- Thus, the actual amount of interest that you earn for the entire year should be more than 2.4% of your original savings account balance due to compound growth.

That's why APY is important.

Annual Percentage Yield (APY)

The **annual percentage yield (APY)** accounts for compound growth, or the additional interest that your interest earns. The formula for APY is:

$$\textbf{APY} = [(1 + \textbf{Periodic Interest Rate})^{(\textbf{Number of periods in year})}] - 1$$

Continuing the above example, you can now calculate the actual interest you will earn on your savings for 1 year. If the bank pays you 0.2% interest each month, then the APY per year on your account is:

$$[(1 + .002)^{(12)}] - 1] = 0.0243 \text{ or } 2.43\% \text{ (rounded)}$$

There are some other things you should keep in mind about the APR and APY.

- The APY is higher than the APR as long as there's more than one compounding period in a year.
- Financial institutions will often quote either the APR or the APY depending on what they are trying to sell to customers (APR on loans and APY on savings) (see **Helpful Hint**).
- You can use the APY with the **Rule of 72**, which provides an estimate of how long it will take you to double your money. To determine the number of periods it will take to double, just divide 72 by the interest rate you can earn on your investment. For example, if you can earn a 9% APY, it'll take approximately 8 years to double your money (72/9 = 8).

HELPFUL HINT

It's always best to use the APY when comparing savings options. When comparing loans, you'll want to use the APR.

Consider Interest Strategically

Interest can be one of your best friends or worst enemies—or both! No matter which it is, interest will constantly be working. You may only work 40 hours per week, but interest works weekends, nights, and holidays. It just keeps accruing and growing. That's great if you're earning interest, but a burden if you're paying it.

Minimizing Interest Payments

The only way to stop interest is to eliminate the cause—the loan principal amount accruing interest. For example, if you want to stop interest from accruing to your credit card payment each month, you need to pay off your credit card debt in full. Along your lifetime financial journey, interest can be either a supportive tailwind or a stiff headwind that slows your progress. Your willingness to wait to spend money will often determine whether you pay interest or receive interest.

The Advantages of Patient Planning

Some types of savings accounts have built-in restrictions and penalties that help you "wait" to spend your money.

- Some financial accounts have early withdrawal penalties. If you take your money out of the account before a certain time (months, years, or before a certain age), you will have to pay a penalty. An example is a bank or credit union certificate of deposit.
- Other financial products, like U.S. savings bonds, will not let you cash in the investment for at least 1 year from the time of purchase.

Consider the following example. Amy was invited to go with her friends, one month from today, on a 4-day/3-night Caribbean cruise. The cruise costs $545. Amy has two options.

Option 1. Her first option is to borrow money by using her credit card to buy her ticket.

- The APR on Amy's credit card is 18%, with a monthly periodic rate of 1.5%.
- Amy plans to pay $50 a month toward this debt.
- Amy will end up making credit card payments for the next 12 months and will pay back the $545 plus $55 of interest.

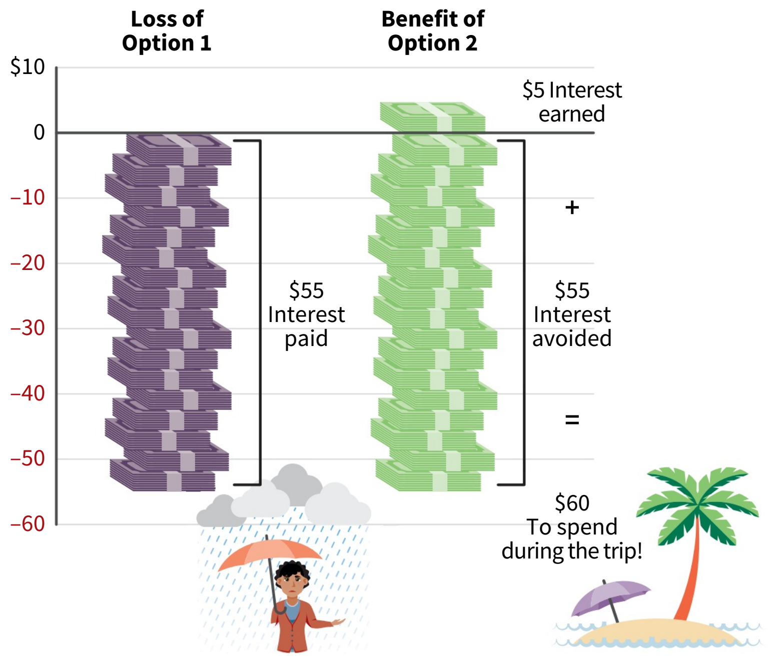
Option 2. Amy's second option is to postpone the trip and plan a cruise for the following year.

- If Amy waits, the ticket will likely still cost $545 (although she may be able to find a better deal because she'll have time to shop around).
- Amy will be able to save $50 per month instead of using this amount to pay off her credit card.
- If she deposits the money into an account with an APY of 2.0%, she'll earn $5.48 in interest and will have $605.48 for the trip.

The difference between borrowing and paying interest (Option 1) and saving and earning interest (Option 2) is shown in **Illustration 2.1.5**.

ILLUSTRATION 2.1.5

Results of Amy's Decision Showing How Waiting Can Pay Off



Concepts in Action

When it comes to saving money, many people simply choose the most convenient savings option. For example, your friend Janine has some money that she would like to save for 5 years. She has been shopping around and found that her bank has a 5-year savings product that pays 0.15% APY. Janine also found another option; it requires a little more work on her part (i.e., opening a new account) but is just as safe as her bank and offers a 2.76% APY. How would you let Janine know that the difference in interest rates is definitely worth the extra effort?

Solution

One easy way you can communicate this benefit to Janine is by using the Rule of 72. If she chose the first option and earned 0.15% on her money, using the Rule of 72, it would take approximately 480 years to double her money (72 ÷ .15)! However, if Janine put forth a little more work and chose the account with an APY of 2.76%, she could double her money in about 26 years. As this shows, even seemingly small differences in interest rates can have significant impacts over time.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following individuals will likely pay the highest rate of interest on borrowed money from a bank?

- **a.** Terry, who has a stable, high-paying job and is borrowing money to purchase a home.
- **b.** Michelle, who is borrowing money to pay for a home improvement.
- **c.** Douglas, who is borrowing money to pay for a vacation.
- **d.** Rachel, who is borrowing money to purchase a new car.

2. The power of compound interest refers to:

- **a.** interest being reinvested and earning additional interest.
- **b.** how long it takes to earn a certain sum.
- **c.** the return on an educational investment.
- **d.** the return on vocational training.

3. Which of the following statements is *true* about compound growth?

- **a.** The longer you let your money grow, the more it will produce.
- **b.** The full benefits of compound growth are generally realized within 5 to 10 years.
- **c.** Only interest experiences compound growth, not other investment gains.
- **d.** How long money is set aside does not matter when calculating compound growth.

4. When comparing loan offers, you should use the:

- **a.** annual percentage yield.
- **b.** annual percentage rate.
- **c.** compound rate of return.
- **d.** geometric average.

5. **Calculate** You have been offered a credit card. The monthly interest rate is 1.9%. What's the card's APR?

- **a.** 22.80%.
- **b.** 23.45%.
- **c.** 25.57%.
- **d.** 26.50%.

6. Given the choice, it is preferable to earn interest that is compounded:

- **a.** daily.
- **b.** monthly.
- **c.** quarterly.
- **d.** yearly.

7. **Calculate** Assume that you can earn 1% interest monthly on your savings. What is the annual percentage yield (APY)?

- **a.** 6.86%.
- **b.** 12.00%.
- **c.** 12.68%.
- **d.** 12.99%.

8. **Calculate** Which of the following is a better deal if you want to maximize the return on your savings?

- **a.** Earning a periodic interest rate of 0.2% compounded monthly.
- **b.** Earning a periodic interest rate of 0.6% compounded quarterly.
- **c.** Earning a periodic interest rate of 1.25% compounded semiannually.
- **d.** Earning a periodic interest rate of 2.50% compounded annually.

9. **Calculate** Approximately how long will it take to double your money if the APY is 6.50%?

- **a.** 9 years.
- **b.** 10 years.
- **c.** 11 years.
- **d.** 12 years.

10. **Calculate** Who is more likely to amass greater wealth?

- **a.** Amal, who earns 3% interest over a 25-year period.
- **b.** Ravi, who earns 8% interest over a 10-year period.
- **c.** Gayle, who earns 5% interest over a 15-year period.
- **d.** Luis, who earns 2% interest over a 30-year period.

Adventures in Personal Finance

Short Answer

1. **Calculate** Assume you are evaluating two different savings account options. One bank is offering an APR of 1.2% compounded monthly (monthly interest rate of 0.1%). The other bank is offering an APY of 1.25%. Assuming all other factors are equal, which offer is better?

2. **Calculate** You just received a credit card offer in the mail. The credit card has an APR of 22.99%, with the interest being calculated and charged on a monthly basis. What is the APY on this credit card?

3. **Calculate** You just received your credit card statement that showed that you charged $200 with your card for the month. If you choose not to pay off your credit card debt, how much interest will be charged on this debt for the month if the APR is 22.99%?

Explore

1. **Calculate** Assume a short-term cash lender is located in your neighborhood. Your friend John is short on cash this month and talks to the lender. The lender tells John that he can get a $100 loan for 9 days. John will get his paycheck in 9 days and will be able to pay back the loan at that time: the $100 borrowed, plus a fee (interest) of $5, for a total of $105. John knows that the 22.99% APR on his credit card is really high, so he is reluctant to use it. What is the APR on the $100 from the short-term neighborhood lender? What is the APY on the same loan? Would your friend be better off using his credit card or taking the short-term loan?

2. **Calculate** Say that your money actually could grow as fast as the rabbit population in Australia, which is approximately equal to an APY of 38%. Assuming that you found a bank that would pay 38% APY and you deposited $100 into your account, how much money would you have in your account after 1 year? After 2 years? After 5, 7, and 10 years?

Expanded Learning Activity

Presentation Visit the websites of the following online banks and credit unions:

- **Ally**
- **Discover Bank**
- **Nationwide**
- **Connexus**
- **CapitalOne 360**

Create a chart showing the APY paid by each institution on deposits. If available, show the APR charged on loans. Summarize your findings by recommending the best bank or credit union for those wanting to maximize the interest earned on their savings. Be sure to share the results of your analysis with others in class.

Overview of Time Value of Money

LO 2.2 Identify how time value of money concepts affect financial goals and decisions.

As part of your lifetime financial journey, you'll need to attach specific dollar estimates to each of your financial dreams. You'll also need to estimate savings requirements, as well as determine how well you are doing in meeting your long-term goals. To do this, you'll need to learn and use some basic math formulas. In this topic, we present a conceptual overview of time value of money principles and how to use them to achieve your financial goals.

Understanding Time Value of Money (TVM)

Defining TVM

Once you have defined your financial goals, you need to link each hoped-for outcome with your current financial information. This is where financial tools come into play. **Time value of money (TVM)** formulas and calculations are valuable personal finance tools because they allow you to specifically consider financial goals in terms of money, time, and interest.

Anytime you are working with a financial goal that involves money, time, and interest, you will want to use TVM calculations. For some students, TVM is a challenging aspect of learning about personal finance topics. This is, after all, the one area that requires the use of math formulas and calculations. But remember—especially if you have a math phobia—that doing these TVM calculations becomes much easier with a little practice.

Most individuals also prefer to use a financial calculator, app, or computer spreadsheet program to solve TVM problems. Financial calculators or TVM apps are easy to use and simplify the math. We will include some basic instructions for using a calculator to solve TVM problems in another topic.

The TVM Glossary

Before jumping into a calculation, let's first review the basic terms associated with TVM formulas. **Illustration 2.2.1** summarizes the key terms that make up traditional TVM formulas (see **Helpful Hint**). If you know three of these variables, you can calculate the fourth; if you know four variables, you can calculate a fifth.

HELPFUL HINT

The terms and abbreviations in Illustration 2.2.1 provide a foundation for understanding TVM when using a calculator or app.

ILLUSTRATION 2.2.1

Time Value of Money Glossary

FV	**Future value** of a lump sum or a series of equal payments (annuity).
PV	**Present value** of a lump sum or a series of equal payments (annuity).
N	**Number of periods** (or payments if an annuity) in which compounding or discounting occurs.
I	**Interest**, which is the rate of return or discount rate used to determine a FV or PV; sometimes known as *internal rate of return*.
PMT	A series of more than one equal **payments** or deposits; in TVM terminology, a PMT is also known as an *annuity*.
Annuity	A series of equal payments or deposits.
Annuity due	Indicates that the payment used in a TVM calculation comes at the beginning of a period. Unless instructed otherwise, you should assume that payments come at the end of a period. Annuity-due assumptions are the exception to the rule.

The Basic TVM Concepts

Let's start with a basic outline of the five most common types of TVM problems (see **Helpful Hint**). These are the tools that you'll use to measure your financial goals:

HELPFUL HINT

All TVM calculations assume compound interest.

1. **Future value of a lump sum.** Estimates how much current savings and investments will be worth at a certain date in the future.

2. **Present value of a lump sum.** Determines the current value of a future amount.
3. **Future value of an annuity.** Estimates how much you will have in the future if you save or invest a set dollar amount on a regular basis.
4. **Present value of an annuity.** Determines the current value of a regular series of equal payments occurring in the future.
5. **Amortization or payment schedule.** Calculates the payment you need to make on a car, home, education, or similar type of loan.

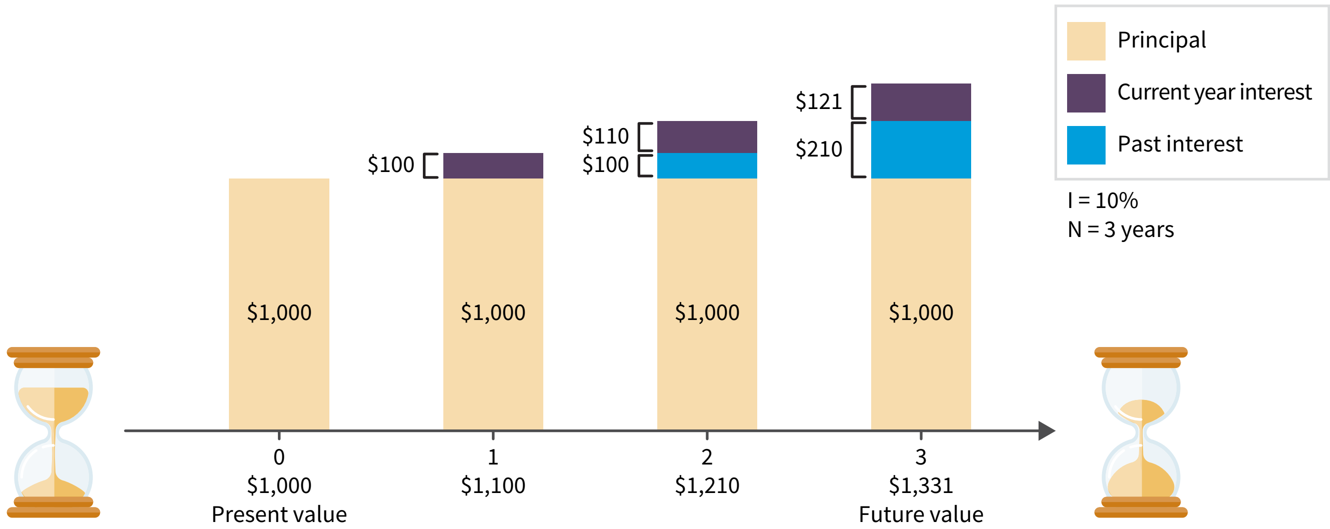
Future Value of a Lump Sum

Illustration 2.2.2 shows the timeline associated with calculating a **future value of a lump sum**. If you start with \$1,000 today, how much will you have in 3 years if you can earn 10% each year? In other words, what is the future value of this amount?

- PV = \$1,000: you know what you have today (\$1,000). This is called the **present value (PV)**.
- I = 10%: you know the **rate of return (I)** of what you can earn on your money each year (10%).
- N = 3: you know the **number of periods (N)** in which you will earn your return (3 years).
- FV = ?: you are trying to find the **future value (FV)**, which is what you will have at the end of the 3-year period.

We'll show you in another topic how you can use a TVM formula, calculator, or table to determine the future value of a lump sum. But for now, you can get this answer by multiplying \$1,000 by (1.10 × 1.10 × 1.10), which equals \$1,331. Notice that when you are looking for a future value, you multiply your present value by a factor greater than 1.0.

ILLUSTRATION 2.2.2 **Future Value of a Lump Sum Timeline**



HELPFUL HINT

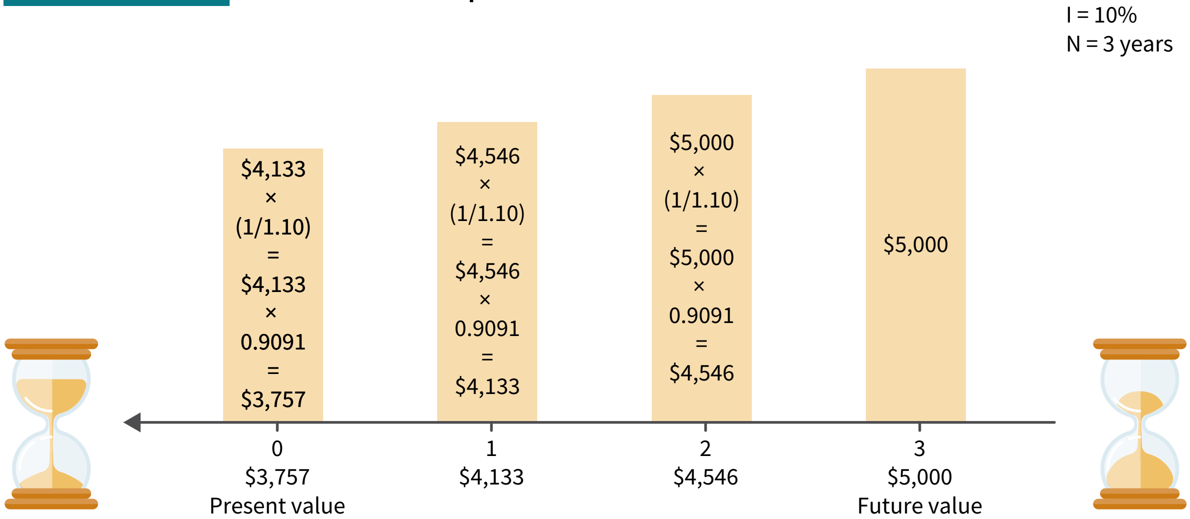
You might use a present value calculation when you know how much you will need in the future (FV) but you are unsure if the amount you have today (PV) is going to be enough given your time horizon (N) and rate of return (I).

Present Value of a Lump Sum

Illustration 2.2.3 shows the timeline when calculating a **present value of a lump sum**, which is the value now of a given amount to be paid or received in the future, assuming compound interest (see **Helpful Hint**).

- For example, how much do you need today (PV) if you know that you will need \$5,000 (FV) in 3 years (N) assuming you can earn 10% interest (I)?
- With these inputs and working backward, you can determine that you need \$3,757 in hand today (PV) to reach your goal.
- This process of determining the present value is called **discounting** the future value.

ILLUSTRATION 2.2.3 **Present Value of a Lump Sum Timeline**



We'll show you in another topic how to use a TVM formula to determine the present value of a lump sum, but for now you can get this answer by multiplying $1,000 by ([1/1.10] × [1/1.10] × [1/1.10]) or $1,000 by (0.9091 × 0.9091 × 0.9091). Notice that when finding the present value, you multiply the future amount by a factor that is less than 1.0.

Future Value of an Annuity

Illustration 2.2.4 shows the timeline involved when calculating a **future value of an annuity**, which is the sum of all the payments (receipts) plus the accumulated compound interest on the payments. Recall that an **annuity** is a series of equal payments (see **Helpful Hint**).

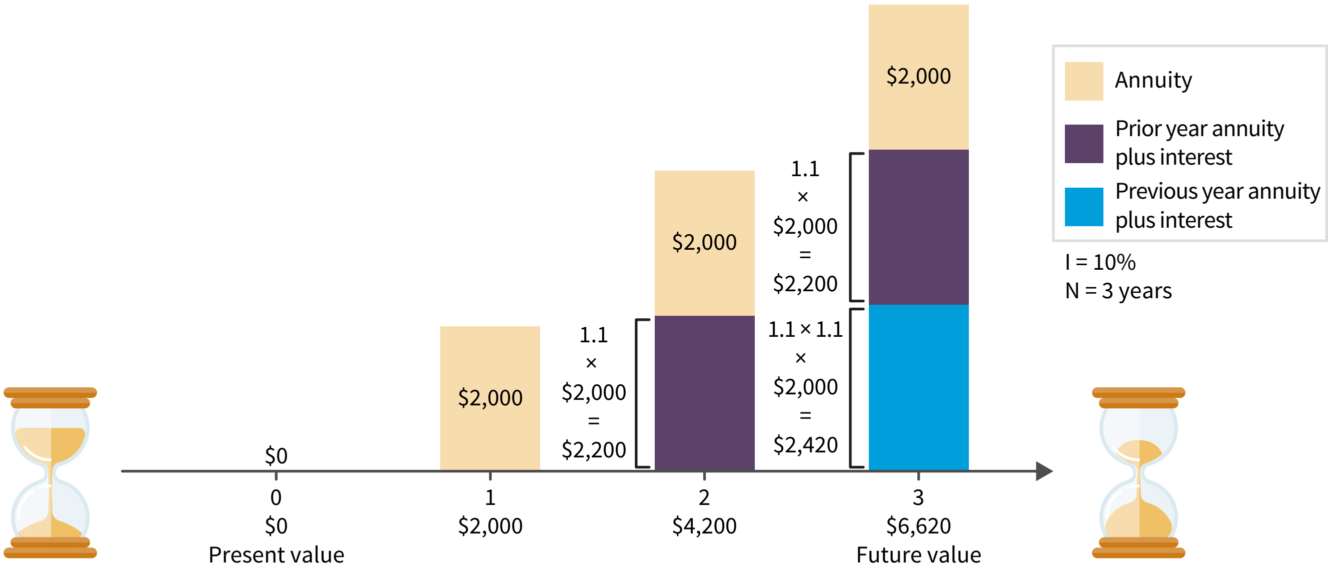
HELPFUL HINT

Annuity payments can be contributions to an account or distributions from an account.

- For example, assume you are investing $2,000 (PMT) at the end of each year for 3 years (N) at a rate of return (I) of 10%. The present value (PV) is $0, which means that there is no other money in the account at the start.
- With these inputs, at the end of the compounding period, you'll have a future value (FV) of $6,620.

We'll show you in another topic how to use a TVM formula to determine the future value of an annuity, but for now you can get this answer by using the following calculation (each period is represented in brackets): [2,000] + [1.1 × 2,000] + [1.1 × 1.1 × 2,000].

ILLUSTRATION 2.2.4 **Future Value of an Annuity Timeline**



Present Value of an Annuity

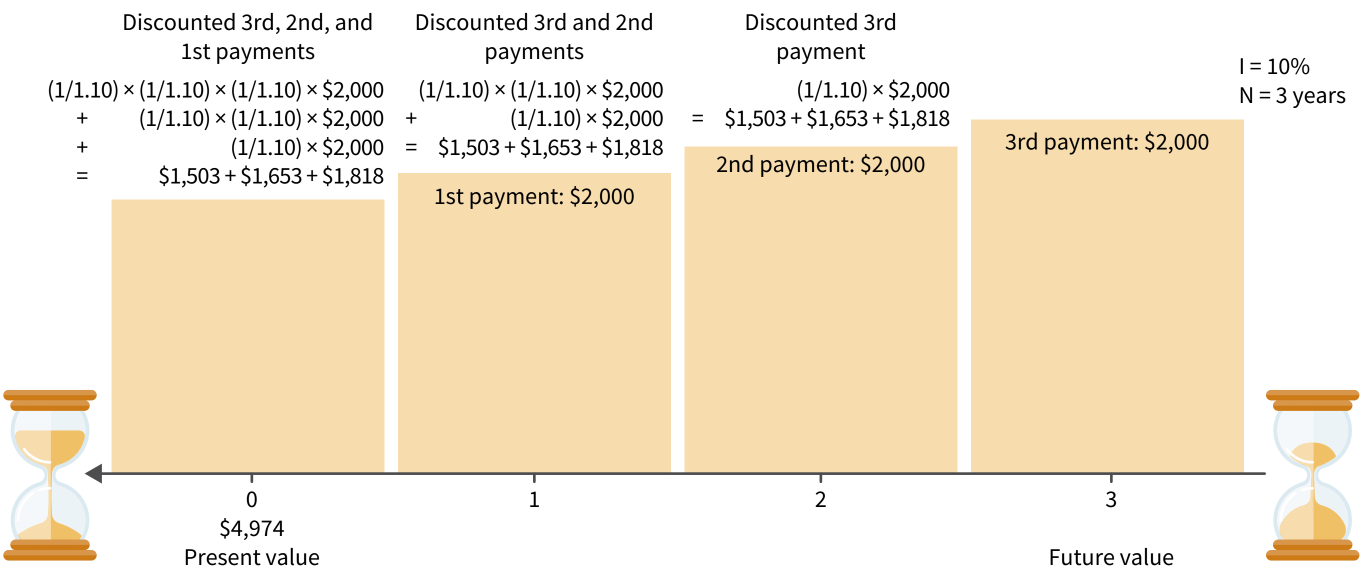
HELPFUL HINT

You might use this TVM calculation when you want to know how much a series of payments you will receive in the future is worth today.

Illustration 2.2.5 shows the timeline when calculating a **present value of an annuity**, which is the value now of a series of future payments discounted assuming compound interest (see **Helpful Hint**).

- For example, say you'll receive $2,000 each year (PMT) for 3 years (N).
- Also assume that if you had the money today, you could earn a 10% rate of return if you invested it (I).
- With these inputs and using a process that is similar to finding the present value of a lump sum, you can determine that this stream of income is worth $4,974 to you today (PV).

ILLUSTRATION 2.2.5 **Present Value of an Annuity Timeline**



We'll show you in another topic how to use a TVM formula to estimate the present value of an annuity, but for now you can get this answer by multiplying each payment of $2,000 by the number of yearly interest rate functions: {[(1/1.10) × $2,000] + [(1/1.10) × (1/1.10) × $2,000] + [(1/1.10) × (1/1.10) × (1/1.10) × $2,000]}. If interest rates are positive, the present value amount is always less than the future value amount.

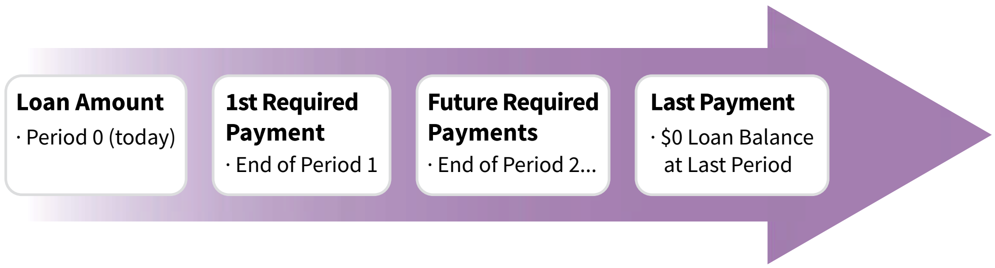
Amortization or Payment Schedule

Illustration 2.2.6 shows the timeline associated with an amortization schedule.

- The process of **amortization** involves paying off a current loan or debt, such as a mortgage or car loan, using a series of payments over time.
- At the end of the time period, the loan value will be zero.

ILLUSTRATION 2.2.6

Loan Amortization Timeline



When calculating the payment needed to pay off a loan (PMT), you need to know the number of payments (N), the interest being paid (I), and the starting loan amount (PV). For example, say you want to purchase a car with a loan. How would you calculate the amortization schedule using TVM?

- The amortization calculation will tell you how much you need to pay per month to pay off the loan.

- To do this calculation correctly, you must be specific when choosing the number of payments. For example, most home, automobile, and student loans are amortized on a monthly basis. This means that if you have a 5-year loan, you'll actually be making 60 payments.
- The interest input needs to be adjusted. If your loan APR is 6%, then you are really paying 0.50% per month in interest.

The math for this calculation is a bit more involved, but we'll show you a shortcut for doing a payment calculation next.

TVM Shortcut: The Rule of 72

Perhaps the simplest "shortcut" to TVM calculations is the Rule of 72, which states:

- To find the approximate number of years (or periods) needed to double your money, just divide 72 by the interest rate (or 72/I).
- To estimate the approximate interest rate needed to double your money, divide 72 by the number of years (or periods) in your goal time horizon (or 72/N).

Let's say you want to estimate how many years it will take your money to grow from $3,000 to $6,000 if you can earn 3% interest.

- Using the Rule of 72, divide 72 by 3 (not 0.03).
- Did you get 24? The actual answer using TVM calculations is 23.45, but 24 is a close estimate.

Now let's say you want to know what interest rate you need to earn to turn $3,000 into $6,000 over 6 years.

- Using the Rule of 72, divide 72 by 6.
- The answer is 12%, which is close to the TVM calculation of 12.25%.

As shown in **Illustration 2.2.7**, the Rule of 72 works nicely as a way to approximate how long it will take to double your money for any financial goal. The higher the interest rate, within reason, the more accurate the Rule of 72 becomes. In situations in which the interest rate is very low—say, below 5%—then you might want to substitute 70 for 72.

ILLUSTRATION 2.2.7
The Time It Takes for Principal to Double in Value

Rate	Actual Periods	Rule of 72 Estimate	Rule of 70 Estimate
1.00%	69.66	72.00	70.00
2.00%	35.00	36.00	35.00
3.00%	23.45	24.00	23.33
4.00%	17.67	18.00	17.50
5.00%	14.21	14.40	14.00
6.00%	11.90	12.00	11.67
7.00%	10.24	10.29	10.00
8.00%	9.01	9.00	8.75
9.00%	8.04	8.00	7.78
10.00%	7.27	7.20	7.00
11.00%	6.64	6.55	6.36
12.00%	6.12	6.00	5.83
13.00%	5.67	5.54	5.38
14.00%	5.29	5.14	5.00
15.00%	4.96	4.80	4.67

Concepts in Action

Jared is saving for a down payment to purchase a house. Based on his budget, he can save $4,500 per year while earning a 5% rate of return (APY). How much will Jared have for a down payment at the end of 5 years? Use the mathematical processes demonstrated in this topic, or you can use an online TVM calculator or app, to determine the answer.

Solution

The inputs are PV ($4,500), N (5 years), and I (5%). The answer (output, or FV) is $24,865.34. You can estimate this amount by using the following calculation (each period is represented in brackets): $[4{,}500] + [1.05 \times 4{,}500] + [1.05 \times 1.05 \times 4{,}500] + [1.05 \times 1.05 \times 1.05 \times 4{,}500] + [1.05 \times 1.05 \times 1.05 \times 1.05 \times 4{,}500]$.

End-of-Topic Assessment

Multiple-Choice Questions

1. Amy's goal is to save $50,000 in 10 years. To know how much she should be saving now on a regular basis to reach this goal, Amy would use:

- **a.** internal finance concepts.
- **b.** a budget.
- **c.** time value of money calculations.
- **d.** several complex math functions.

2. James is wondering how much money he needs to have to receive an annuity payment of $10,000 per month for 30 years, after which time the payments will stop and his investment will be used up. James believes he can earn 6% on his investments. How many TVM inputs does James need to solve this problem?

- **a.** One input (the interest rate).
- **b.** Two inputs (the interest rate and time period).
- **c.** Three inputs (the interest rate, time period, and payment amount).
- **d.** Four inputs (the interest rate, time period, payment amount, and present value).

3. Ginger has been given the option to receive a series of equal payments. This is referred to as a(n):

- **a.** lump sum.
- **b.** annuity.
- **c.** present value.
- **d.** payment.

4. The difference between an annuity and an annuity due is that an annuity due is:

- **a.** a series of payments occurring at the end of the month.
- **b.** a series of payments occurring at the beginning of the month.
- **c.** a periodic distribution that changes in value.
- **d.** a fixed payment that must be discounted.

5. Levi currently has $10,000 for a home down payment and would like to know how much it will be worth in 5 years if he earns 4% interest. Levi is looking for the:

- **a.** present value of a lump sum.
- **b.** future value of a lump sum.
- **c.** future value of an annuity.
- **d.** present value of an annuity.

6. Sharon wants to know how much money she will have saved for retirement if she saves $300 per month for the next 20 years and earns 8% interest each year. Sharon is looking for the:

- **a.** present value of an annuity.
- **b.** annuity payment schedule.
- **c.** future value of an annuity.
- **d.** rate of return.

7. Despite all good advice, Susan played the lottery and won $100,000. She can choose to receive the money all at once today or receive monthly payments of $1,000 for 15 years. Susan could earn a 6% rate of return on her investment. Susan could compare these options by doing which of the following?

- **a.** Calculate the present value of the annuity payments and compare it the $100,000 lump-sum option.
- **b.** Determine the annuity payment schedule.
- **c.** Calculate the monthly payments (annuity) that could be generated using a $100,000 PV and compare the payments to the $1,000 payment option.
- **d.** Both calculate the present value of the annuity payments and compare it to the $100,000 lump-sum option and calculate the monthly payments (annuity) that could be generated using a $100,000 PV and compare the payments to the $1,000 payment option.

8. Alexis is considering taking out a loan to purchase a car. She'd like to know how much her payment would be if she borrowed $10,000 for 5 years at 4% interest. What TVM tool should Alexis use?

- **a.** Future value of an annuity.
- **b.** Amortization schedule.
- **c.** Present value of an annuity due.
- **d.** Present value of an annuity.

9. Nancy just received a graduation gift of $10,000 from her grandparents. She'd like to invest the money, and once it has doubled in value, use it for graduate school. She believes that she'll be able to earn a 10% rate of return. What tool(s) can Nancy use to calculate how long it will take her money to double?

- **a.** Solve for the number of periods.
- **b.** Rule of 72.
- **c.** Solve for the number of periods and Rule of 72.
- **d.** Present value of a lump sum.

10. Because of the TVM concepts learned in this topic, you should ____________ receiving $1,000 in 1 year if given the opportunity to receive $1,000 in 2 years from today.

- **a.** be indifferent to
- **b.** prefer
- **c.** decline
- **d.** find out more information before

Adventures in Personal Finance

Short Answer

1. **Calculate** You'd like to purchase a new car when you graduate and start working. The car that you would really like costs $35,000. You've checked with the bank and based on your income, you would qualify for a car loan with an annual interest rate of 5.9% with a 3-year repayment period. What would be your monthly car loan payment? To answer this question, conduct an Internet search and find at least two online TVM calculators. Compare your answers from the two calculators and reconcile any differences.

2. **Calculate** You'd like to purchase a new car when you graduate and start working. The car that you would really like costs $35,000. You've checked with the bank and based on your income, you would qualify for a car loan with an annual interest rate of 5.9% with a 3-year repayment period. You now realize that you're not able to afford this car payment each month and still pay your other monthly expenses. The bank offers a 5-year car loan with the same interest rate. If you were to choose the 5-year car loan instead of the 3-year car loan, how much lower would your monthly payment be? To answer this question, conduct an Internet search and find at least two online TVM calculators. Compare your answers from the two calculators and reconcile any differences.

3. **Calculate** Your friend Beth just graduated and has two job offers that she is considering. Both jobs pay the same, but Job A contributes $2,000 annually to Beth's retirement plan and Job B does not offer a retirement plan at all. Assuming that Beth will be at her first job for 5 years and that she will earn 8% annually on her retirement savings plan, how much will Beth have in her retirement plan at Job A?

Explore

1. **Calculate** **Writing** There are hundreds of TVM calculators available online. Conduct an Internet search and find five online calculators. Using the same data, solve a present value and future value problem using each calculator. Write a summary of your findings, focusing on whether the outputs were the same for each calculator. If the solutions were different, how large were the differences? Finally, recommend the one calculator that you believe was accurate and the easiest to use.

2. The interest rate used in TVM calculations is important and can have a big impact on the outcome of the problem. As a result, it needs to be as accurate as possible. Conduct an Internet search for the following interest rates or rates of return (assume you qualify for the best rate):

- **a.** Savings account interest rates.
- **b.** Three-year auto loan.
- **c.** Five-year auto loan.
- **d.** Thirty-year mortgage.
- **e.** Historical rates of return in the stock market.

Expanded Learning Activity

Writing **Groupwork** As you have learned in this topic, TVM functions should be used whenever money, interest, and time are involved in a financial goal. Chances are most people don't know that they are using TVM in their daily lives. Identify some common items that use TVM (such as any type of loan payment, long-term savings plans, etc.). Talk to four people that are at least 5 years older than you. Ask them if they ever use TVM functions in their financial decisions. Then ask them if they are involved in any of the financial activities you identified that use TVM. If they are, find out more information, such as who determined the loan payment for them or how they know how much they should be saving for retirement. Work with a group of two to three other students and write a 300- to 500-word paper summarizing how these people use, or fail to use, TVM concepts in their financial decisions and transactions.

Time Value of Money Calculations

LO 2.3 Calculate the effect of time and interest on financial decisions pertaining to planning, investing, and borrowing.

During your lifetime financial journey, you will be faced with many unique financial opportunities to invest, borrow, and plan for the future. Knowing how much you can afford to borrow *before* you apply for a loan or talk with a lender is a powerful tool. Additionally, having the ability to determine your loan payment based on the amount borrowed and interest rate charged might just protect you from being overcharged by thousands of dollars. Finally, calculating how much you should be saving for long-term goals will give you confidence in your plans or the opportunity to adjust your plans while you still have time to make changes. In this topic, you'll learn how to perform your own time value of money (TVM) calculations, which is an essential tool for building a strong financial future.

Methods for Solving TVM Problems

There are multiple ways to solve TVM problems. Most often people prefer to use a spreadsheet program like Microsoft® Excel, a financial calculator, or an app designed to solve these types of problems. However, there is value in learning how to do TVM calculations yourself either using formulas or compound interest tables. We will provide some basic steps to follow when using a calculator to solve TVM problems. However, you should consult the user manual specific to your calculator for more detailed instructions.

TVM Formulas

Illustration 2.3.1 shows the formulas that you can use to solve five widely encountered TVM problems (see **Helpful Hint**). We'll discuss the use of each formula in more detail later in this topic. Just remember that if you can master these formulas, you'll be well on your way to TVM competency!

HELPFUL HINT

These formulas may look a bit overwhelming, but you can master them by reviewing the accompanying examples and then working to duplicate the results.

TVM Tables

TVM tables make the majority of calculations relatively easy. There are five primary TVM tables.

1. Future Value of $1.
2. Present Value of $1.
3. Future Value of an Annuity of $1.
4. Present Value of an Annuity of $1.
5. Amortization or Payment Schedule.

We'll show you how to use each of these tables next.

Solving TVM Problems

In this section, we'll do a number of practice problems using formulas and tables.

ILLUSTRATION 2.3.1 **TVM Formulas, Examples, and Solutions**

Formula	Example	Solution
Future Value of a Lump Sum $FV = PV\,(1+I)^N$	If Teresa can earn 7% (I), what will her $2,500 (PV) in savings be worth in 10 years (N)?	$\$2{,}500(1+0.07)^{10} = \$4{,}918$
Present Value of a Lump Sum $PV = \dfrac{FV}{(1+I)^N}$	How much do you need today to ensure that you will have $10,000 (FV) in 5 years (N), assuming you can earn 6% (I) on your savings?	$\dfrac{\$10{,}000}{(1+0.06)^5} = \$7{,}474$
Future Value of an Annuity $FVA = \dfrac{PMT}{I}[(1+I)^N - 1]$	How much will Robert accumulate in his retirement account if he saves $3,000 per year (PMT) for 20 years (N) and earns 9% (I) on his investments?	$\dfrac{\$3{,}000}{0.09}[(1+0.09)^{20} - 1] = \$153{,}480$
Present Value of an Annuity $PVA = \dfrac{PMT}{I}\left[1 - \dfrac{1}{(1+I)^N}\right]$	Bertha's goal is to fund 4 years of her son's college education. She anticipates the cost of college to be $7,500 per year (PMT). How much does Bertha need today to be able to fund all 4 years of college (N) (assume she can earn 5% [I] on her savings)?	$\dfrac{\$7{,}500}{0.05}\left[1 - \dfrac{1}{(1+0.05)^4}\right] = \$26{,}595$
Present Value of an Annuity Due* $PVAD = \dfrac{PMT}{I}\left[1 - \dfrac{1}{(1+I)^N}\right](1+I)$	Bertha's goal is to fund 4 years of her son's college education. She anticipates the cost of college to be $7,500 per year (PMT). How much does Bertha need today to be able to fund all 4 years of college (N) (assume she can earn 5% [I] on her savings)? Bertha must pay tuition for her son at the beginning of each year.	$\dfrac{\$7{,}500}{0.05}\left[1 - \dfrac{1}{(1+0.05)^4}\right](1+0.05) = \$27{,}924$

*When you see the term *annuity due*, remember that the payments or deposits come at the beginning of the period. The annuity due formula accounts for this by inflating the traditional result for the calculation's rate of return. All of the other formulas use end-of-period assumptions.

Future Value of a Lump Sum

Here's an example showing how to calculate a future value. Let's say that you receive $1,000 at your college graduation. If you invest the gift and earn 8% annually, how much will you have in 20 years? Let's first solve using the following formula.

$$FV = PV(1+I)^N$$
$$FV = \$1{,}000 \times (1.08)^{20}$$
$$FV = \$1{,}000 \times 4.66096$$
$$FV = \$4{,}660.96$$

Next, let's solve the problem using a TVM table. **Illustration 2.3.2** shows the Future Value of $1 table that you'll need to use. Here's how to use the table.

1. Find the number of periods (20) in the first column.
2. Move to the right until you find the future value factor that corresponds to the 8% column: 4.66096.
3. Multiply the factor by your present value ($1,000): $\$1{,}000 \times 4.66096 = \$4{,}660.96$.

You should notice two things. First, the solution is the same whether calculated with the formula or the table. Second, the future value factor in the table (4.66096) is basically the same as $(1.08)^{20}$ in the formula.

You can also solve this problem very quickly on a calculator with TVM functions. The calculator keystrokes outlined in this text are for the Texas Instrument BA II Plus™. Before starting any

ILLUSTRATION 2.3.2 **Future Value of $1**

Periods	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	1.04000	1.05000	1.06000	1.07000	1.08000	1.09000	1.10000	1.11000	1.12000
2	1.08160	1.10250	1.12360	1.14490	1.16640	1.18810	1.21000	1.23210	1.25440
3	1.12486	1.15763	1.19102	1.22504	1.25971	1.29503	1.33100	1.36763	1.40493
4	1.16986	1.21551	1.26248	1.31080	1.36049	1.41158	1.46410	1.51807	1.57352
5	1.21665	1.27628	1.33823	1.40255	1.46933	1.53862	1.61051	1.68506	1.76234
6	1.26532	1.34010	1.41852	1.50073	1.58687	1.67710	1.77156	1.87041	1.97382
7	1.31593	1.40710	1.50363	1.60578	1.71382	1.82804	1.94872	2.07616	2.21068
8	1.36857	1.47746	1.59385	1.71819	1.85093	1.99256	2.14359	2.30454	2.47596
9	1.42331	1.55133	1.68948	1.83846	1.99900	2.17189	2.35795	2.55804	2.77308
10	1.48024	1.62889	1.79085	1.96715	2.15892	2.36736	2.59374	2.83942	3.10585
11	1.53945	1.71034	1.89830	2.10485	2.33164	2.58043	2.85312	3.15176	3.47855
12	1.60103	1.79586	2.01220	2.25219	2.51817	2.81266	3.13843	3.49845	3.89598
13	1.66507	1.88565	2.13293	2.40985	2.71962	3.06580	3.45227	3.88328	4.36349
14	1.73168	1.97993	2.26090	2.57853	2.93719	3.34173	3.79750	4.31044	4.88711
15	1.80094	2.07893	2.39656	2.75903	3.17217	3.64248	4.17725	4.78459	5.47357
16	1.87298	2.18287	2.54035	2.95216	3.42594	3.97031	4.59497	5.31089	6.13039
17	1.94790	2.29202	2.69277	3.15882	3.70002	4.32763	5.05447	5.89509	6.86604
18	2.02582	2.40662	2.85434	3.37993	3.99602	4.71712	5.55992	6.54355	7.68997
19	2.10685	2.52695	3.02560	3.61653	4.31570	5.14166	6.11591	7.26334	8.61276
20	2.19112	2.65330	3.20714	3.86968	4.66096	5.60441	6.72750	8.06231	9.64629

TVM problem on your calculator, you should clear the TVM registry of inputs and then follow these steps:

HELPFUL HINT

Notice that when using TVM functions on your calculator, the interest rate is entered as a whole number (e.g., for 8%, you would enter 8, not .08).

1. Enter the variables you know: 8 = I, 20 = N, and 1,000 = PV (see **Helpful Hint**).
2. Once you have entered at least three inputs, you can then compute an output. In this example, you will want to compute the future value by pressing CPT and then pressing FV.
3. The answer is $4,660.96.

Present Value of a Lump Sum

Imagine you are offered the choice of taking $1,000 today or $1,200 in 5 years. Before you can make a decision, you also need to know what rate of return you can earn on your savings (sometimes called the **discount rate**). You determine that you can earn 5%. What should you do? You should use the present value of a lump sum formula to compare the $1,000 that you can receive today to the present value of $1,200 as follows:

$$PV = \frac{FV}{(1+I)^N}$$

$$PV = \$1{,}200/(1.05)^5$$

$$PV = \$1{,}200/1.27628$$

$$PV = \$940.23$$

HELPFUL HINT

Note that the Present Value of $1 table is set up exactly the same as the Future Value of $1 table.

As you can see, the present value of receiving $1,200 in 5 years is only $940.22. So, it's better to take the $1,000 right now.

Illustration 2.3.3 shows the Present Value of $1 table that you can also use to solve the problem (see **Helpful Hint**).

ILLUSTRATION 2.3.3 **Present Value of $1**

Periods	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89286
2	0.92456	0.90703	0.89000	0.87344	0.85734	0.84168	0.82645	0.81162	0.79719
3	0.88900	0.86384	0.83962	0.81630	0.79383	0.77218	0.75131	0.73119	0.71178
4	0.85480	0.82270	0.79209	0.76290	0.73503	0.70843	0.68301	0.65873	0.63552
5	0.82193	0.78353	0.74726	0.71299	0.68058	0.64993	0.62092	0.59345	0.56743
6	0.79031	0.74622	0.70496	0.66634	0.63017	0.59627	0.56447	0.53464	0.50663
7	0.75992	0.71068	0.66506	0.62275	0.58349	0.54703	0.51316	0.48166	0.45235
8	0.73069	0.67684	0.62741	0.58201	0.54027	0.50187	0.46651	0.43393	0.40388
9	0.70259	0.64461	0.59190	0.54393	0.50025	0.46043	0.42410	0.39092	0.36061
10	0.67556	0.61391	0.55839	0.50835	0.46319	0.42241	0.38554	0.35218	0.32197
11	0.64958	0.58468	0.52679	0.47509	0.42888	0.38753	0.35049	0.31728	0.28748
12	0.62460	0.55684	0.49697	0.44401	0.39711	0.35553	0.31863	0.28584	0.25668
13	0.60057	0.53032	0.46884	0.41496	0.36770	0.32618	0.28966	0.25751	0.22917
14	0.57748	0.50507	0.44230	0.38782	0.34046	0.29925	0.26333	0.23199	0.20462
15	0.55526	0.48102	0.41727	0.36245	0.31524	0.27454	0.23939	0.20900	0.18270
16	0.53391	0.45811	0.39365	0.33873	0.29189	0.25187	0.21763	0.18829	0.16312
17	0.51337	0.43630	0.37136	0.31657	0.27027	0.23107	0.19784	0.16963	0.14564
18	0.49363	0.41552	0.35034	0.29586	0.25025	0.21199	0.17986	0.15282	0.13004
19	0.47464	0.39573	0.33051	0.27651	0.23171	0.19449	0.16351	0.13768	0.11611
20	0.45639	0.37689	0.31180	0.25842	0.21455	0.17843	0.14864	0.12403	0.10367

1. Find the number of periods in column 1, which is 5.
2. Go to the right until you find the present value factor in the 5% column: 0.78353.
3. Multiply $1,200 by 0.78353 and you will get $940.24 (which is very close to the formula calculation).

To solve this problem on your calculator, be sure that the TVM registry is clear. You can then enter the inputs that you know: 5 = I, 5 = N, and FV = 1,200. Once the inputs are entered, you can compute (CPT) PV. The answer is $940.23.

Future Value of an Annuity

By now, you might be asking how you can determine how much money you'll have in the future if you save money every year instead of starting with a lump sum. When you start saving money on a regular basis, this is called an *annuity*. In TVM lingo, the amount saved or paid each period is referred to as a *payment (PMT)*. Payments are different than present or future values because, as the name implies, a payment happens more than once.

How much, for example, will you accumulate in 20 years if you start saving $1,000 *every year* (each payment is the same amount) and earn 9% on your savings? The following formula can be used to answer this question:

$$FVA = \frac{PMT}{I}\,[(1+I)^N - 1]$$

$$FVA = (\$1{,}000/0.09) \times [(1+0.09)^{20} - 1]$$

$$FVA = \$11{,}111.11 \times 4.60441$$

$$FVA = \$51{,}160.11$$

You can also solve this problem with a TVM table. **Illustration 2.3.4** shows the Future Value of an Annuity of $1 table that can be used to solve the problem as follows:

1. Just like the other table examples, start by finding the number of payments (20) in the first column.
2. Go to the right until you find the future value factor corresponding to the 9% column: 51.16012.
3. Multiply $1,000 by 51.16012. This gives you a future value of $51,160.12, which is nearly the same as what you estimated using the formula.

To solve this problem on your calculator, you will need to clear your TVM registry and then check to make sure your payments per year is set at 1. Then enter your inputs: 9 = I, 20 = N, and 1,000 = PMT. Now compute the future value by pressing CPT and then FV. The answer is $51,160.12.

ILLUSTRATION 2.3.4 **Future Value of Annuity of Investing $1 at the End of Each Period**

Periods	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%
1	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000
2	2.04000	2.05000	2.06000	2.07000	2.08000	2.09000	2.10000	2.11000	2.12000
3	3.12160	3.15250	3.18360	3.21490	3.24640	3.27810	3.31000	3.34210	3.37440
4	4.24646	4.31013	4.37462	4.43994	4.50611	4.57313	4.64100	4.70973	4.77933
5	5.41632	5.52563	5.63709	5.75074	5.86660	5.98471	6.10510	6.22780	6.35285
6	6.63298	6.80191	6.97532	7.15329	7.33592	7.52334	7.71561	7.91286	8.11519
7	7.89829	8.14201	8.39384	8.65402	8.92280	9.20044	9.48717	9.78327	10.08901
8	9.21423	9.54911	9.89747	10.25980	10.63663	11.02847	11.43589	11.85943	12.29969
9	10.58280	11.02656	11.49132	11.97799	12.48756	13.02104	13.57948	14.16397	14.77566
10	12.00611	12.57789	13.18079	13.81645	14.48656	15.19293	15.93743	16.72201	17.54874
11	13.48635	14.20679	14.97164	15.78360	16.64549	17.56029	18.53117	19.56143	20.65458
12	15.02581	15.91713	16.86994	17.88845	18.97713	20.14072	21.38428	22.71319	24.13313
13	16.62684	17.71298	18.88214	20.14064	21.49530	22.95339	24.52271	26.21164	28.02911
14	18.29191	19.59863	21.01507	22.55049	24.21492	26.01919	27.97498	30.09492	32.39260
15	20.02359	21.57856	23.27597	25.12902	27.15211	29.36092	31.77248	34.40536	37.27972
16	21.82453	23.65749	25.67253	27.88805	30.32428	33.00340	35.94973	39.18995	42.75328
17	23.69751	25.84037	28.21288	30.84021	33.75023	36.97351	40.54470	44.50084	48.88367
18	25.64541	28.13238	30.90565	33.99903	37.45024	41.30134	45.59917	50.39593	55.74972
19	27.67123	30.53900	33.75999	37.37896	41.44626	46.01846	51.15909	56.93949	63.43968
20	29.77808	33.06595	36.78559	40.99549	45.76196	51.16012	57.27500	64.20283	72.05244

Present Value of an Annuity

Imagine that you have just received a sizable inheritance from a long-lost relative. Your relative's will provides you with the following choices: (1) take a lump sum of $1,000,000 today or (2) receive $75,000 per year for the next 20 years. Which is the better option, assuming you do not need the lump sum today and the current market interest rate is 5%?

The following formula can be used to answer this question:

$$PVA = \frac{PMT}{I}\left[1 - \frac{1}{(1+I)^N}\right]$$

$PVA = (\$75{,}000/0.05) \times [(1 - (1/(1 + 0.05)^{20})]$
$PVA = \$1{,}500{,}000 \times 0.62311$
$PVA = \$934{,}665$

Given the choice, you should take the $1,000,000 lump sum rather than the annual payments. Keep in mind, however, that if the discount rate were to go down, then taking the annual payments would be a better choice. Why? Because as the rate of interest goes down, the earnings generated from investing the lump sum decrease, which means you will earn less over the 20-year period.

You can also answer the question using a Present Value of an Annuity TVM table.

1. Find the number of periods (20) from the first column in **Illustration 2.3.5**.
2. Go to the right until you find the present value factor that corresponds to the 5% interest column: 12.46221.
3. Multiply $75,000 by 12.46221 to get $934,666, which is about what you got with the formula (the only difference is due to rounding).

Using your calculator, you should input the following: 5 = I, 20 = N, and 75,000 = PMT. You can then compute PV. The result is $934,665.78.

ILLUSTRATION 2.3.5 **Present Value of Annuity of $1 at the End of Each Period**

Periods	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%	11.00%	12.00%	15.00%
1	0.96154	0.95238	0.94340	0.93458	0.92593	0.91743	0.90909	0.90090	0.89296	0.86957
2	1.88609	1.85941	1.83339	1.80802	1.78326	1.75911	1.73554	1.71252	1.69005	1.62571
3	2.77509	2.72325	2.67301	2.62432	2.57710	2.53130	2.48685	2.44371	2.40183	2.28323
4	3.62990	3.54595	3.46511	3.38721	3.31213	3.23972	3.16986	3.10245	3.03735	2.85498
5	4.45182	4.32948	4.21236	4.10020	3.99271	3.88965	3.79079	3.69590	3.60478	3.35216
6	5.24214	5.07569	4.91732	4.76654	4.62288	4.48592	4.35526	4.23054	4.11141	3.78448
7	6.00205	5.78637	5.58238	5.38989	5.20637	5.03295	4.86842	4.71220	4.56376	4.16042
8	6.73274	6.46321	6.20979	5.97130	5.74664	5.53482	5.33493	5.14612	4.96764	4.48732
9	7.43533	7.10782	6.80169	6.51523	6.24689	5.99525	5.75902	5.53705	5.32825	4.77158
10	8.11090	7.72173	7.36009	7.02358	6.71008	6.41766	6.14457	5.88923	5.65022	5.01877
11	8.76048	8.30641	7.88687	7.49867	7.13896	6.80519	6.49506	6.20652	5.93770	5.23371
12	9.38507	8.86325	8.38384	7.94269	7.53608	7.16073	6.81369	6.49236	6.19437	5.42062
13	9.98565	9.39357	8.85268	8.35765	7.90378	7.48690	7.10336	6.74987	6.42355	5.58315
14	10.56312	9.89864	9.29498	8.74547	8.24424	7.78615	7.36669	6.98187	6.62817	5.72448
15	11.11839	10.37966	9.71225	9.10791	8.55948	8.06069	7.60608	7.19087	6.81086	5.84737
16	11.65230	10.83777	10.10590	9.44665	8.85137	8.31256	7.82371	7.37916	6.97399	5.95424
17	12.16567	11.27407	10.47726	9.76322	9.12164	8.54363	8.02155	7.54879	7.11963	6.04716
18	12.65930	11.68959	10.82760	10.05909	9.37189	8.75563	8.20141	7.70162	7.24967	6.12797
19	13.13194	12.08532	11.15812	10.33560	9.60360	8.95012	8.36492	7.83929	7.36578	6.19823
20	13.59033	12.46221	11.46992	10.59401	9.81815	9.12855	8.51356	7.96333	7.46944	6.25933

Payments

There are times you'll need to calculate what is called an **amortized payment**—a payment of the same amount for a set number of months or years—such as for a car loan or mortgage. To do so, you should use the following formula:

$$\text{Monthly Payment} = PV\left[\frac{(I \times (1+I)^N)}{((1+I)^N - 1)}\right]$$

In the formula, PV is the amount borrowed, I = interest rate, and N = number of payments.

For example, say that Max wants to borrow $250,000 to purchase a home. He can get a 30-year loan at a 6% interest rate. To help Max determine if he can afford this loan, you first need to convert the years to months and the yearly rate of interest to monthly interest because Max will be making monthly payments.

- Number of periods (N) = 30 years × 12 months = 360
- Monthly interest rate (I) = 6%/12 = 0.5% = 0.005

You can now use the following formula to determine how much Max's *monthly* payment will be (that is, you can calculate his principal and interest payment).

$$\text{Monthly payment} = PV\left[\frac{(I \times (1+I)^N)}{((1+I)^N - 1)}\right]$$

$$\text{Monthly payment} = \$250{,}000\left[\frac{(0.0050 \times (1+0.0050)^{360})}{((1+0.0050)^{360} - 1)}\right]$$

$$\text{Monthly payment} = \$250{,}000\left[\frac{(0.0050 \times (6.0226)}{(6.0226 - 1)}\right] = \$1{,}498.88$$

If you round the answer, Max will need to pay approximately $1,500 per month for the next 30 years to pay off the home mortgage loan.

You can also solve this problem using an amortization schedule. The factors shown in **Illustration 2.3.6** show the monthly dollar payment needed to pay off a $1,000 loan. To estimate the monthly payment needed by Max:

1. Find the interest rate of the loan in the first column.
2. Go to the right until you find the amortization factor matching 30 years: $6.00 (Max will pay $6.00 for every $1,000 borrowed).
3. Divide the loan amount by $1,000: ($250,000/$1,000) = $250 (you need to do this to keep the factors consistent with the loan amount).

ILLUSTRATION 2.3.6

Amortization Schedule for Monthly Payments for Every $1,000 Borrowed

	Years					
	5	10	15	20	25	30
3.00%	$17.97	$ 9.66	$ 6.91	$5.55	$4.74	$4.22
3.50%	$16.67	$ 8.33	$ 5.56	$4.17	$3.33	$2.78
4.00%	$18.42	$10.12	$ 7.40	$6.06	$5.28	$4.77
4.50%	$18.64	$10.36	$ 7.65	$6.33	$5.56	$5.07
5.00%	$18.87	$10.61	$ 7.91	$6.60	$5.85	$5.37
5.50%	$19.10	$10.85	$ 8.17	$6.88	$6.14	$5.68
6.00%	$19.33	$11.10	$ 8.44	$7.16	$6.44	$6.00
6.50%	$19.57	$11.35	$ 8.71	$7.46	$6.75	$6.32
7.00%	$19.80	$11.61	$ 8.99	$7.75	$7.07	$6.65
7.50%	$20.04	$11.87	$ 9.27	$8.06	$7.39	$6.99
8.00%	$20.28	$12.13	$ 9.56	$8.36	$7.72	$7.34
8.50%	$20.52	$12.40	$ 9.85	$8.68	$8.05	$7.69
9.00%	$20.76	$12.67	$10.14	$9.00	$8.39	$8.05
9.50%	$21.00	$12.94	$10.44	$9.32	$8.74	$8.41
10.00%	$21.25	$13.22	$10.75	$9.65	$9.09	$8.78

4. Multiply 250 by \$6.00 to get \$1,500, which is a very close approximation of the actual amount of the loan payment.

   To solve this problem using your calculator, a couple of steps are required.

1. Similar to using the formula, you will need to divide the interest rate by 12 and then multiply the years by 12 to get the total number of payments.
2. Remember that when using a calculator, the interest rate is treated as a whole number.
3. The inputs should be as follows: $(6/12) = 0.5 = \text{I}$, $(30 \times 12) = 360 = \text{N}$, and $250{,}000 = \text{PV}$.
4. Now you can simply compute the PMT. The solution is \$1,498.88.

Other TVM Calculations

As the examples show, you can use TVM calculations when faced with different financial decisions. Some calculations, however, are a bit more challenging because they require you to modify the basic TVM formulas. Here are two examples:

1. If you have \$3,000 saved in the bank earning 4% interest, how long will it take for you to have \$6,000 to buy a car?
2. If you really need to have \$6,000 to buy the car in 6 years and you have \$3,000 saved already, how much interest will you need to earn to reach your goal?

   Let's break down these examples step-by-step using the information you have learned so far.

- You know the future amount (FV) you need to buy the car: \$6,000.
- You know the present value (PV) of what you have on hand right now: \$3,000.
- You know the rate of return (I) that you can earn in a bank account: 4%.

What you need to determine is the goal time horizon: N. These inputs and output are shown in **Illustration 2.3.7**.

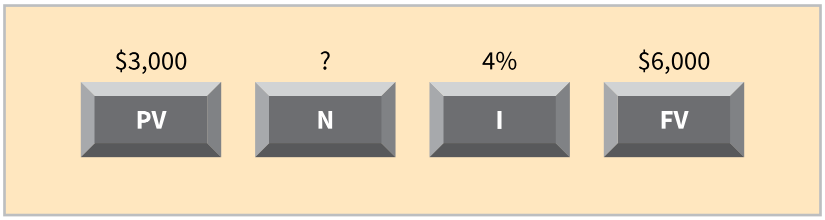


ILLUSTRATION 2.3.7

Estimating the Time Needed to Meet a Future Value Goal

With the inputs and output needed identified, you can find the answer.

Example 1

Let's tackle the first example. Here's how you can solve the problem using the following formula (see **Helpful Hint**):

$$
\begin{aligned}
&FV = PV \times (1 + I)^N \\
&\$6{,}000 = \$3{,}000 \times (1.04)^N \\
&\$6{,}000/\$3{,}000 = 1.04^N \\
&2 = 1.04^N \\
&ln(2)/ln(1.04) = \text{N} = 17.67
\end{aligned}
$$

HELPFUL HINT

ln **is a mathematical term for the natural logarithm or what is called the log.**

This means that it takes 17 2/3 years to double your money at 4% interest!

You can also answer this question using a TVM table. Go back to Illustration 2.3.3, the Present Value of a Lump Sum table. Here's what you need to do:

- Divide the present value ($3,000) by the future value ($6,000): 0.50.
- Go the table and move down the 4% column until you find a present value factor close to 0.50. You should see that 0.50 falls between 0.51337 and 0.49363. These are the factors associated with 17 and 18 years, respectively.
- This tells you that it will take longer than 17, but less than 18, years to double your money.

This is easy to solve with a calculator. Simply enter the inputs you know: 4 = I, −3,000 = PV, and 6,000 = FV. Note that the PV and FV must have the opposite signs in order for the calculator to solve the problem. You can then compute N. The solution is 17.67 years.

Example 2

Now let's try answering the second question, using the same formula from the first example.

$$
\begin{aligned}
&FV = PV \times (1 + I)^N \\
&\$6{,}000 = \$3{,}000 \times (1 + I)^6 \\
&\$6{,}000/\$3{,}000 = (1 + I)^6 \\
&2 = (1 + I)^6 \\
&\sqrt[6]{2} = \sqrt[6]{(1 + I)^6} \\
&1.1225 = (1 + I) \\
&1.1225 - 1 = I = 0.1225
\end{aligned}
$$

In other words, you would need to earn nearly 12.25% on an annual basis to reach your goal!

You can also use Illustration 2.3.3 to solve this problem.

- Again, divide the present value ($3,000) by the future value ($6,000): 0.50.
- Because you know the number of periods (6), start on that line of the table and move to the right until you find a present value factor that is close to 0.50. The closest number on the table corresponds to the 12% column (0.50663).
- Because the factor numbers decrease as the number of years increases, you know that it is going to take just a bit more than 12 years to double your money (see **Helpful Hint**).

HELPFUL HINT

You could have also arrived at an estimate of these answers using the Rule of 72.

This can also be solved using your calculator. Similar to the last example, you will want to be sure that the sign of the PV and FV amounts are opposite. The inputs would be: 6 = N, −3,000 = PV, and 6,000 = FV. You can then compute I. The answer is 12.25%.

Congratulations, you have now made it through what will probably be the most complex calculations you'll need to make in this text. As you can see, it is not difficult to use TVM formulas or tables to help make financial decisions!

Concepts in Action

Your neighbor, a research scientist, stopped by to tell you that she just sold one of her patents to a large pharmaceutical company. She was excited when she told you that she received a check for $500,000. She would like to quit her job and "retire" today, but she knows that it would be better to wait until she has $1,000,000 saved. If your neighbor can earn 9% interest on the $500,000, how many years must she wait before she retires?

Solution

The answer is approximately 8 years. The easiest way to solve this problem is to use the Rule of 72 (72/9 = 8). You can also solve this problem using the following formula:

$FV = PV \times (1 + I)^N$
$\$1{,}000{,}000 = \$500{,}000 \times (1.09)^N$
$\$1{,}000{,}000/\$500{,}000 = 1.09^N$
$2 = 1.09^N$
$ln(2)/ln(1.09) = N = 8.04$

You also know that you can solve this problem using a TVM table (see Illustration 2.3.3).

- Divide the present value ($500,000) by the future value ($1,000,000): 0.50.
- Go to the 9% column and move down the column until you find the present value factor that is close to 0.50.
- The closest factor is 0.50187, which corresponds to the 8-period row.

End-of-Topic Assessment

Multiple-Choice Questions

1. **Calculate** Amy has $3,000 saved to buy a new car. If she can earn a 7% rate of return for 3 years, how much will she have (approximately) at the end of the 3 years?

a. $3,210.

b. $3,630.

c. $3,675.

d. $3,884.

2. **Calculate** What is the future value of $100,000 if you can earn 9% on an annual basis for 9 years? (Round your answer.)

a. $181,650.

b. $200,000.

c. $217,189.

d. $234,782.

3. **Calculate** Nancy would like to purchase a car in 5 years. The car will cost $34,000 at that time. If she can earn 8% on an investment, how much would she need to invest today to make sure that she can afford the car at the end of 5 years? (Round your answer.)

a. $19,143.

b. $23,000.

c. $23,140.

d. $32,410.

4. **Calculate** Assume your employer offers a bonus of $7,500. The only catch is that you must wait 6 years to take possession of the money. If you can earn 4% on your savings, what is the minimum you would take today to match the bonus? (Round your answer.)

a. $5,900.

b. $6,300.

c. $7,500.

d. $9,490.

5. **Calculate** Kenneth is contributing to his 401(k) retirement plan. He contributes $3,000 per year. His employer matches 50% of his contribution. If Kenneth can earn a 10% rate of return, how much (approximately) will he have in his account after 10 years?

a. $18,433.

b. $27,650.

c. $47,812.

d. $71,718.

6. **Calculate** Davis has received a college scholarship and can choose whether to receive it as an immediate one-time payment of $10,000 or as a series of four equal payments (at the end of each year), each totaling $3,000. Assume that Davis secures a discount rate of 9%. Only considering TVM principles, which option is most valuable to Davis?

a. He should take an immediate payment of $10,000.

b. He should take a series of four payments of $3,000 each.

c. Both scenarios are equal.

d. There is not enough information to determine the answer.

7. Car loans and mortgages are examples of:

a. present values of lump-sum payments.

b. future values of lump-sum payments.

c. annuity payments.

d. annuity-due payments.

8. **Calculate** John is in the market for a used car. He has found the same sports car at two different dealerships and is now considering from which dealer he should purchase the car. Dealer 1 requires John to get the loan through its lending department. Dealer 1 has told John that, because the dealership does its own financing, it can get John the very best loan possible and John will only have to pay $247 per month for 60 months (5 years). Dealer 2 is selling the car for $12,000. Dealer 2 has told John he can use its financing or get his own lender, so John talked with his bank and learned that he can get a 5-year car loan for 4.9% APR. Dealer 2 has also offered John a 5-year loan for 5.9%. Based on these loan options, is Dealer 1's loan payment offer of $247 per

month John's best deal? What is the lowest monthly loan payment John could get if the purchase price of the car is $17,000?

- **a.** $247 per month for 60 months from Dealer 1.
- **b.** $231 per month for 60 months from Dealer 2.
- **c.** $226 per month for 60 months from John's bank.
- **d.** There is not enough information to determine which loan option will have the lowest monthly payment.

9. **Calculate** Assuming Maria has $1,000 today, approximately how long will it take Maria to double her money if she can earn a 3% return on her investment?

- **a.** 36.2 years.
- **b.** 23.5 years.
- **c.** 18.1 years.
- **d.** 14.4 years.

10. **Calculate** Larry hopes to buy a house in 7 years. He currently has $75,000 saved. How much must he earn in interest, on an annualized basis, to purchase a house valued at $150,000? (Round your answer.)

- **a.** 7.8%.
- **b.** 10.4%.
- **c.** 12.0%.
- **d.** 17.5%.

Adventures in Personal Finance

Short Answer

1. **Calculate** Which variable has the biggest impact on TVM calculations? Examine an FV of an annuity problem where annual payments are $2,000, the rate of return is 8%, and the number of years is 10. Using these inputs, the FV of the annuity is $28,973.12. For the following questions, use the originally stated variables (PMT = $2,000, N = 10, and I = 8%) except as directed.

- **a.** What is the FV if the annual payment is doubled from $2,000 to $4,000?
- **b.** What is the FV if the interest rate is doubled from 8% to 16%?
- **c.** What is the FV if the time period is doubled from 10 years to 20 years?

2. **Calculate** Seth was hoping to travel around the world for $25,000 in 4 years and currently has $12,500 set aside for the trip. He realizes that to achieve this goal, he has to earn an extremely high rate of return. The problem is that Seth is loss-averse and has a relatively low tolerance for financial risk. Although he does want to take his world cruise vacation, he decides to delay it, knowing that he could never sleep at night if he lost a large percentage of his savings. Based on this information, how much will Seth accumulate if he earns 5% annually in a low-risk investment for 15 years? Does the future value amount meet his $25,000 goal?

3. **Calculate** Let's say that you can choose between the following two alternatives: (1) you will be given $50,000, the money will be placed in an account earning 10% interest, and you may have the future value in 20 years; or (2) $7,500 will be placed in an account every year for 20 years, the account will earn 8% an annual basis, and you may have the future value in 20 years. If your goal is to maximize your savings, which alternative should you choose?

Explore

1. The Internet has greatly simplified TVM calculations for those willing to seek out and understand these tools. Think of one financial goal that you have that is related to time and money. Find an appropriate TVM calculator that is specifically designed for your situation (i.e., retirement). Input your information into the calculator and find an answer. How helpful is this information? Is the amount you were looking for more, less, or about the same as you expected? What could you do to change the output of the calculator?

2. **Writing** Financial planners tend to use TVM calculators produced by **Hewlett Packard (HP)** and **Texas Instruments (TI)**. Search these firms' websites and find information about the HP 12c, HP 10bII, and TI BAII Plus calculators. Compare and contrast the features of each calculator, along with the price of each calculator. Write a summary of your findings.

Expanded Learning Activity

Writing **Calculate** When Juan started his business, he had virtually no savings. His initial investment into his business was $1,000 for a computer. He worked very hard to make customers happy and grow his business. Now after 5 years, Juan is selling his business for $1,500,000. What is Juan's rate of return on his investment? Discuss how likely it is for entrepreneurs to experience success similar to Juan's.

Your Starting Point: The Balance Sheet

LO 2.4 Describe how to use a balance sheet as a financial-management tool to track changes in assets, liabilities, and net worth.

Before you can make sense of any plan, you must know your starting point and have some destination in mind. Think of it this way: If you decide to drive from Atlanta to Seattle in the shortest time possible, you should consult a map or GPS, create a plan, make sure your car is ready, and then start driving. Although there might be bumps and detours during the trip, at least you will know if you are heading in the right direction.

The same is true when it comes to your lifetime financial journey. Unfortunately, most people have only a vague idea of where they are starting from financially, where they want to be financially in the future, and whether they are even on the right financial path. For example, if asked, would you know right now what you own and what these assets are worth? Do you know how much you owe, or would it take some time to add up all your debts? In this topic, we introduce an essential financial tool, a balance sheet, which will help you to always know where you are in your journey.

Determining Your Net Worth

A **balance sheet** helps you organize what you own—**assets**—and what you owe—**liabilities**. Your assets less your liabilities equals your **net worth**:

Assets – Liabilities = Net Worth

Illustration 2.4.1 shows a personal balance sheet.

- The left side of the balance sheet shows the value of the things you own.
- The right side of the sheet shows the amount owed to others.
- Also shown on the right side is the amount of wealth that is yours, which is generally called *net worth*.
- By rewriting the net worth formula as Assets = Liabilities + Net Worth, you can see that everything on the left side of the equation must equal the totals on the right side.

The balance sheet documents what you own, what you owe, and what your net worth is at a specific point in time. The amounts on the balance sheet will vary at different points in time, reflecting the net effect of your daily and annual cash inflows and outflows—your income surplus or deficit. For example, if each month your income exceeds expenses by $100 and you put this into savings, your net worth will increase based on your cash assets increasing by $100 per month.

Let's look at assets, liabilities, and net worth in more detail to show how the balance sheet provides such valuable financial information.

Assets

As shown in Illustration 2.4.1, you should list everything you own on the left side of the balance sheet (see **Helpful Hint**).

- As you are starting out on your financial journey, that may be a relatively short list.
- Later in your life, the list may grow to be very long. Grouping assets into categories, as shown in Illustration 2.4.1, provides a more efficient summary of your assets.

HELPFUL HINT

You will likely need to add new categories for assets not listed in Illustration 2.4.1. In this respect, a balance sheet is flexible.

ILLUSTRATION 2.4.1 **Personal Balance Sheet**

Monetary Assets	Market Value
Checking account(s)	
Savings account(s)	
Money market account(s)	
Certificates of deposit(s) (short-term)	
Other	
Total	

Investment Assets	Market Value
Mutual funds	
Exchange-traded funds	
Brokerage account(s)	
Stocks	
Bonds	
Rental real estate	
Cash value of insurance	
Certificates of deposit(s) (long-term)	
Total	

Household Assets	Market Value
Primary residence	
Second home	
Vehicle 1	
Vehicle 2	
Boat	
Other	
Furniture	
Electronics	
Other household items	
Other	
Total	

Retirement	Market Value
Employer plans	
IRA(s) / Roth IRA(s)	
Other	
Total	

Miscellaneous	Market Value
College savings accounts	
Hobby assets	
Other	
Total	
Total Assets	

Short-Term Liabilities	Amount
Personal loans	
Visa®	
MasterCard®	
Other credit card(s)	
Utilities	
Other	
Total	

Long-Term Liabilities	Amount
Mortgage	
Second mortgage	
Vehicle loan 1	
Vehicle loan 2	
Boat loan	
Student loan(s)	
Consumer loan(s)	
Installment loan(s)	
Other	
Total	
Total Liabilities	

Net Worth	Amount
Total assets	
Total liabilities	
Total Net Worth	

Identifying assets seems simple, but it can sometimes be more difficult than you think. Here is the key question to ask yourself to determine if you own something: Can you legally sell the asset? Think about the car you are driving back and forth to school and work. If you needed cash today, could you sell the car? That is, is your name on the title? If the answer is yes, then you own the car and you should list it as your asset. If your parents or someone else is on the title, then you don't own the asset. The ownership rule holds true for other assets, such as computers, bank accounts, tablets, clothes, and furniture. If you can sell it legally (or withdraw all of the cash from an account), you should list the asset on your balance sheet.

You may have noticed that the balance sheet is set up so that assets that you can sell quickly are at the top and the least sellable items are at the bottom.

- This ordering is based on the notion of liquidity. **Liquidity** refers to how quickly an asset can be converted to cash without penalties or a significant reduction in value.
- Given this definition, cash is generally the first asset listed.
- A jet ski (listed as part of Household Assets) will fall far down the list because jet skis are hard to sell quickly.

Once you have listed everything you own, you must place a value on the assets. You almost always want to show the **fair market value** of the things you own. The fair market value is the price someone would realistically pay you to buy the asset. It is *not* the price you paid for something or the price you would pay someone else.

- Some assets, like houses, will increase in fair market value over time. These are known as **appreciating assets**.
- Other assets, such as cars and computers, will fall in value over time. These are known as **depreciating assets** (see **Helpful Hint**).

HELPFUL HINT

You should strive to have most of your wealth tied up in appreciating rather than depreciating assets. You probably recognize that many of the "fun" things you buy are depreciating assets, so a balance needs to be achieved based on your preferences.

Finding market values for the things you own may take a bit of investigation. The Internet is a great place to start. Search for the price of items like yours that have recently sold. Just because something is listed for sale does not mean that is the real value. You want the sales price, not the asking price. Other places to get market values include **eBay**, thrift stores, flea markets, and yard sales. You can also pay to obtain an appraisal from a professional for some assets, such as real estate, jewelry, and special collections.

Let's look at Tommy's balance sheet. Tommy just graduated from college and is preparing his balance sheet. He has been working for about 6 months and recently purchased a used car using a loan from the bank. He has started saving in his employer's retirement plan. Along with his other personal belongings, the assets section of Tommy's balance sheet is shown in **Illustration 2.4.2**.

Liabilities

Now let's jump to the other side of the balance sheet. Here is where you list all your liabilities—the debts that you owe to others—such as credit card debt that has not been paid and any loans on items such as cars, jet skis, houses, and student loans. Determining how much you owe is easy.

- Find a recent account statement, such as a credit card bill, and enter the balance due (principal amount owed) on the balance sheet.
- For some loans, you may need to call the lender to get the amount. Be sure to put the total amount of the debt, not the payment you make each month.
- Liabilities are generally listed based on when the debt should be paid off. **Short-term liabilities**, such as utility bills, credit cards, and short-term installment loans, are due within a year. **Long-term liabilities** have a longer repayment schedule and would include student loans and money borrowed to purchase a house (i.e., a mortgage).

ILLUSTRATION 2.4.2
Tommy's Assets

Monetary Assets	Market Value
Checking account(s)	$ 272
Savings account(s)	1,321
Total	$ 1,593
Household Assets	**Market Value**
Tommy's car	$ 8,500
Furniture	1,200
Electronics	1,500
Other personal belongings	500
Total	$11,700
Retirement	**Market Value**
Employer plans	$ 934
Total	$ 934
Total Assets ($1,593 + $11,700 + $934)	**$14,227**

Let's look at the liabilities section of Tommy's balance sheet. We know that he recently purchased a used car using a car loan. Tommy also has some credit card debt that he generally pays off monthly, but at the current moment he does have a balance on his credit card. He also has some student loans. Tommy pays his bills on time, and his utility bills and rent are due at the start of next month. **Illustration 2.4.3** shows the liabilities section of Tommy's balance sheet.

ILLUSTRATION 2.4.3
Tommy's Liabilities

Short-Term Liabilities	Amount
Visa® bank credit card	$ 622
Utilities	480
Rent	950
Total	$ 2,052
Long-Term Liabilities	**Amount**
Car loan	$ 8,245
Student loan	7,129
Total	$15,374
Total Liabilities ($2,052 + $15,374)	**$17,426**

Net Worth

Once you have values for all assets and liabilities, you can calculate your net worth using the formula **Assets – Liabilities = Net Worth**.

Using this formula, changes in your assets or liabilities will also result in changes to your net worth. *This formula must always balance!* For example, say that you buy a car for $14,000. You paid $4,000 as a down payment and borrowed the rest. You list this purchase on the balance sheet as follows.

- List $14,000 for car as an **asset**.
- List $10,000 as car loan as a **liability**.
- To keep the net worth equation in balance, the difference between the asset and liability ($4,000) shows up as your **equity** in the net worth section.

Although establishing financial goals is one of the first steps in your financial journey, knowing your net worth today is an important financial data point that marks the real beginning of your lifetime financial journey.

So how is Tommy doing regarding his net worth? **Illustration 2.4.4** shows his net worth based on his assets and liabilities. As you can see, Tommy has a negative net worth of $3,199 (see **Helpful Hint**). Negative net worth is not uncommon, especially for recent college graduates just starting their careers. It is important to remember that Tommy's largest and most important asset, his human capital, is not listed on the balance sheet. If his human capital were listed as an asset, his assets would far exceed his liabilities (this is why a bank was willing to give Tommy a car loan).

HELPFUL HINT

A negative net worth does not mean bankruptcy. It just means that someone *owes* more than she or he *owns*.

ILLUSTRATION 2.4.4

Tommy's Net Worth

Net Worth	Amount
Assets	$14,227
Less: Liabilities	17,426
Net Worth	**$(3,199)**

The Importance of Net Worth

As you may have already guessed, your net worth estimate gives you a basic picture of how much money you would have if you sold all of your assets and paid off all your debts. This is the same as calculating what you are worth financially. Let's now put all of this into context.

Parties Interested in Your Net Worth

It is important to note that **lenders** (banks, credit unions, car dealerships, and others) almost always want to know your net worth before giving you a loan.

- The higher your net worth estimate, the better.
- Those with a positive net worth tend to get superior deals on loans.

Don't let this statement scare you though. It would be quite unusual for someone in high school or college to have a high net worth. In fact, a negative figure is the norm at a young age. Having a negative net worth is something you should expect during the beginning stages of your financial journey.

Good Debt versus Bad Debt

Think back to previous discussions about human capital. As a college student, you're investing in yourself. We would say that you are investing in your human capital. You're spending money and probably going into debt to pay for your education, transportation, and other items that you need. That is what financial planners call **good debt**.

You should avoid bad debt though. A **bad debt** happens when you borrow money to buy something that either goes down in value quickly or is consumed immediately.

- Let's say Lenny buys lunch for $5 every work day using a credit card.
- If Lenny doesn't pay off the credit card every single month, he may end up spending not only hundreds of dollars on food but also going into debt for something that no longer exists by paying interest on his loan.
- This is an example of bad debt.

Financial Ratios: Guideposts Along Your Financial Journey

Let's say that you have your net worth figure in hand. You are also committed to avoiding bad debt and paying off your liabilities as quickly as you can. If this is the case, then you are starting your

financial journey wisely. What you need now are guideposts that you can use to determine if you are on track to meeting your financial goals. Fortunately, you can use a **financial ratio**, which is a formula that tells you how well you are progressing financially, as a guideline.

Current Ratio

HELPFUL HINT

Monetary assets can be easily converted into a specified amount of cash. Long-term investments and accounts subject to penalty for early withdrawal are not monetary assets.

Nearly every financial planner would argue that you should strive to be financially secure enough that you could pay off all your current (short-term) debts with your monetary assets (see **Helpful Hint**).

- This means that you should be able to take your cash and money in the bank and pay off your credit card debts and other liabilities that are due within a year.
- In an ideal world, you will also have money left over.
- At a minimum, you should have at least $1 in liquid savings (bank or checking account assets) for every $1 of short-term debt.

The **current ratio** is the proportion of current assets to current liabilities. This ratio tells you if you are managing your short-term financial situation prudently.

Debt Ratio

HELPFUL HINT

It may take a while for you to achieve these benchmarks, but by striving to meet or do better than these guidelines, your financial journey will become easier overtime.

The **debt ratio** is a broader measure of your financial health. This ratio shows your proportion of total liabilities (debts) to total assets. You should strive to limit debt to no more than 40% of the value of your assets (see **Helpful Hint**). For example, if you have $100 in assets, you should have $40 or less in total liabilities.

Illustration 2.4.5 summarizes these two important ratios based on information from a balance sheet.

ILLUSTRATION 2.4.5

Financial Ratios Used with the Balance Sheet

Financial Ratio	Formula	Standard Benchmark
Current Ratio	Monetary Assets/Current Liabilities	Ratio > 1.0 or 100%
Debt Ratio	Total Liabilities/Total Assets	Ratio < 0.40 or 40%

Concepts in Action

Tiago and Louise, both age 37, have been married for 9 years. Over the past few years, they have focused their efforts on saving more money, investing wisely, and paying off debt. Their current financial situation is as follows:

Asset	Value	Liability	Amount
Checking account	$ 2,400	Credit cards	$ 4,000
Savings account	9,000	Mortgage	224,000
Brokerage account	34,000	Car loans	30,000
Home	285,000	Student loans	18,000
Cars	32,000		
Household items	20,000		
Retirement plans	123,000		
Other assets	89,000		

Use this information to answer the following questions.

1. What is their net worth?
2. What is their current ratio?

3. What is their debt ratio?
4. Given your analysis of their financial situation, how are Tiago and Louise doing financially?

Solution

1. Net Worth = $318,400 ($594,400 – $276,000)
2. Current Ratio = 2.85 [($2,400 + $9,000)/$4,000]
3. Debt Ratio = 46.43% ($276,000/$594,400)
4. Given their current age, Tiago and Louise appear to be doing quite well financially. Their net worth is positive and high. Additionally, their current ratio exceeds the recommended benchmark. However, their debt ratio is higher than the benchmark, and it may benefit them financially to reduce some of their debt.

End-of-Topic Assessment

Multiple-Choice Questions

1. What form is used by financial planners to estimate someone's net worth?
   - **a.** Cash flow statement.
   - **b.** Budget.
   - **c.** Balance sheet.
   - **d.** Income and expense statement.
2. What is the formula for net worth?
   - **a.** Liabilities – Assets.
   - **b.** Debts – Liabilities – Assets.
   - **c.** Assets – Liabilities.
   - **d.** Assets + Debts – Liabilities.
3. All of the following are examples of monetary assets, *except:*
   - **a.** cash.
   - **b.** checking account.
   - **c.** coins.
   - **d.** stocks.
4. Haley owns a Honda Civic. She is creating her balance sheet and needs to input a value for the car. Which of the following is an indication of the car's fair market value?
   - **a.** The price of a similar Civic for sale.
   - **b.** The trade-in value of the car.
   - **c.** The price that Haley paid for the car.
   - **d.** The amount of the loan balance outstanding on the car.
5. Which of the following is a short-term debt?
   - **a.** A balance owed on a credit card statement.
   - **b.** A deferred student loan.
   - **c.** A vehicle loan on a new car.
   - **d.** All of the answer choices are short-term debts.
6. **Calculate** Marcus has the following financial resources, assets, and liabilities: $4,000 Mazda Miata, $3,000 in computer equipment, $8,000 in earnings, $2,000 in credit card bills, and $1,000 in student loans. What is Marcus's net worth?
   - **a.** $4,000.
   - **b.** $7,000.
   - **c.** $12,000.
   - **d.** $15,000.

Jorge's assets and liabilities are listed below. Use this data to answer Questions 7–9.

Cash: $500
Clothes and furnishing: $5,000
Car: $15,000
Investments: $50,000
Credit card bills: $300
Car loan: $5,000
Student loan: $12,000

7. **Calculate** What is Jorge's current net worth?
   - **a.** $17,500.
   - **b.** $48,000.
   - **c.** $53,200.
   - **d.** $70,500.
8. **Calculate** What is Jorge's current ratio?
   - **a.** 0.03.
   - **b.** 0.09.
   - **c.** 1.67.
   - **d.** 4.08.
9. **Calculate** What is Jorge's debt ratio?
   - **a.** 0.25.
   - **b.** 0.60.
   - **c.** 1.67.
   - **d.** 35.00.
10. Which of the following statements is *true*?
    - **a.** The greater the debt ratio, the worse the financial situation.
    - **b.** The greater the current ratio, the worse the financial situation.
    - **c.** The lower the debt ratio, the worse the financial situation.
    - **d.** The lower the current ratio, the worse the financial situation.

Adventures in Personal Finance

Short Answer

1. Explain how a balance sheet helps explain the status of a person's current financial situation.

2. Describe some of the personal and environmental factors that can help shape someone's net worth position today and in the future.

3. Assuming that you own the following property, determine the order that these will be listed on the balance sheet: stamp collection, checking account, car, boat, and furniture.

4. **Calculate** Your neighbor has the following assets and liabilities:

- Savings account: $1,000
- Six-month certificate of deposit (CD): $200
- Car: $3,500
- Baseball card collection: $75
- Clothes: $450
- Furniture: $600
- Credit card bills: $375
- Money owed to friend (to be paid next month): $100
- Car loan: $1,000

Based on this information, answer the following questions to help your neighbor get his finances in order.

a. What is your neighbor's net worth?

b. Which asset(s) is considered a monetary asset on the balance sheet?

c. What is the total amount owed for current debts and liabilities?

d. What is his current ratio?

e. What is his debt ratio?

f. Interpret the current- and debt-ratio calculations.

Explore

1. Your best friend Ashanda is creating her balance sheet. She owns a basic 2015 Ford Focus SE hatchback. As of today, the car has been driven 22,000 miles. When you looked at the car, you saw normal wear and tear but no major mechanical problems. Go to either the **Edmunds** or **Kelley Blue Book** website to find both the trade-in and private-party value of the car. Which is higher and why? Which value should Ashanda use on her balance sheet?

2. As you have learned from this topic, the value of your human capital is not shown on the balance sheet as an asset. However, this is important information for lenders to know when deciding whether to give you a loan. If you were a lender, what information would you be interested in knowing to assess the value of someone's human capital and whether he or she would be able to repay a loan on time?

Expanded Learning Activity

Calculate Complete a personal balance sheet for yourself if you are single, or for your family if you have others in your household. Be sure to carefully document all the assets you own and obtain fair market value estimates for your assets. Similarly, gather information on all unpaid liabilities and other debts. Once you input these data into the balance sheet, calculate your net worth and the current and debt ratios for your situation. Be sure to comment on the status of your assets and liabilities and what the financial ratios indicate about your financial situation.

The Personal Budget

LO 2.5 Explain how to use a personal budget to track and forecast cash flow to achieve financial goals.

American history is rich with stories of famous explorers and pioneers who, with great uncertainty about what lay ahead of them, set out on their journey. Those explorers who were successful, such as Lewis and Clark, learned how to prepare, use, and replenish their resources in extreme environments. They did this not only to survive but also to thrive.

You may not be about to explore new lands, but you do need to use resources to manage your financial journey. You have already learned about time value of money calculations and the balance sheet. We are now going to add another tool to help you along your financial journey: a budget. A **budget** helps you think about how much you will earn (your income) and spend (your expenses) in the future. Budgets are an essential resource management tool because they help you keep your spending in line with your plans.

HELPFUL HINT

These steps, although certainly important in terms of money management, also apply to the management of other resources, including your health, time, skills, and social networks.

The Five Steps of Resource Management

Illustration 2.5.1 shows the five steps involved in the management of household financial resources (see **Helpful Hint**). Let's look at each step in more detail.

ILLUSTRATION 2.5.1 The Process of Resource Management

Setting Goals

At Step 1, you establish one or more financial goals.

- As discussed previously, a good way to do this is to use the SMART approach to goal development.
- Taking the time to specifically outline what is important for you today and in the future, based on your attitudes, perceptions, and preferences, is a positive way to shape financial goals.
- Incorporating these types of personal finance factors into the goal-formation process also helps provide a purpose behind managing your money.

Tracking Resources

At Steps 2 and 3, you start tracking where your resources come from and how resources are currently used.

- You need to know where your money for day-to-day expenses and longer-term goal implementation is coming from and where it is going.
- Unless you systematically track your income and expenses, you probably don't know how much you're really earning and spending.

When tracking your income and expenses, it's therefore important that you document what you purchase, not just the amount spent. For example, if you purchase a number of items from a store, it's important to break out these costs into categories of expenses, such as food, clothing, entertainment, and household necessities. **Tracking** can be done any number of ways, such as using a computer spreadsheet, going old school with pen and paper, or using a smartphone app. There are also companies, such as **Mint.com**, that will combine your electronic spending from multiple accounts automatically, saving

HELPFUL HINT

It is easy to recognize poor spending habits in others, but it is more difficult to see the same issues in ourselves. This isn't because we are being overly judgmental but rather because many of our spending habits are so routine that most of us are not even aware of them.

you time and effort. Simple income- and expense-tracking exercises are incredibly effective in helping you become aware of and identify your own spending habits (see **Helpful Hint**).

Planning and Using Resources

At this point in the process, you are ready to set up guidelines for how you *want* your money to be spent (Step 4) and then how you will monitor the actual use of your resources compared to these guidelines (Step 5). This is a budget. A **budget** is a financial tool that helps you regulate how quickly and in what ways your money is going to be used so that you can stay focused on accomplishing your goals. Two other tools are also often used:

1. An **income and expense statement**, which is essentially the amount of money earned and the money spent in reality. Whereas a budget is a projection, an income and expense statement documents what actually happened.
2. A **cash flow statement**, which includes income and expenses, but also includes withdrawals from savings, loan proceeds, and other transfers of money.

In this discussion, we focus on the budget. When you develop and use a budget, you're deliberately choosing how to use your money to help you reach your financial destination. A completed budget is essentially a cash flow statement.

The Budget

Format of the Budget

HELPFUL HINT

Variable expenses are usually listed below income and fixed expenses because you may add or delete items over time.

Illustration 2.5.2 shows the important elements in a budget: income, fixed expenses, and variable expenses.

- **Fixed expenses** are difficult to change and must be paid.
- **Variable expenses**, on the other hand, fluctuate from month to month and are easier to reduce (see **Helpful Hint**).

The main point is that you should create a budget in a format that you find to be useful and easy to maintain. You can see in Illustration 2.5.2 that there are three columns after each item in the budget. The first is how much you *think* you will receive or spend in each category; this is your **projection**. The next column is the amount you actually spent. The third column is the difference between the projected amount and the actual amount. Thus, a complete budget process includes projections, results, and identification of differences.

The Three Sections of a Budget

As shown in Illustration 2.5.2, there are three main sections in a budget.

1. Income.
2. Expenses.
3. Surplus (deficit) estimate.

Income should include all resources that can be spent or saved, such as wages or salaries, interest earned at a bank or credit union, and allowances.

- Note that the total amount in savings (the amount in the bank) is a balance sheet item, whereas the amount pulled from a savings account is income.
- Student loan proceeds each semester or month can also be a source of income. Keep in mind, however, that the actual student loan amount shows up on the balance sheet as a liability.

ILLUSTRATION 2.5.2

Personal Budget Sheet

Income	Projection	Actual	Difference
Wages			
Gift income			
Student loan proceeds			
Scholarships			
Other			
Total Income			
Fixed Expenses	**Projection**	**Actual**	**Difference**
Personal savings			
Taxes			
Rent or mortgage			
Utilities			
Credit card payments (for prior balances only)			
Car loan payment			
Student loan			
Other debt payments			
Phone bill			
Insurance			
Other			
Subtotal			
Variable Expenses	**Projection**	**Actual**	**Difference**
Gas for car			
Auto maintenance			
Groceries			
Eating out			
Entertainment			
Charitable donations			
Clothing			
Personal care			
Travel			
Other			
Subtotal			
Total Expenses			
Summary	**Projection**	**Actual**	**Difference**
Income			
Expenses			
Surplus (or Deficit)			

HELPFUL HINT

You can also have fewer categories. But with fewer categories, you have limited ability to understand why a certain category is high or low for the month.

Expenses include everything—really that means *everything*—you spend money on.

- Make sure your budget includes as many categories of expenses as desired. Detail is important. For example, you may want to separate the Utilities category into Water and Electricity (see **Helpful Hint**).
- Credit card payments can be a bit tricky. If you have a credit card balance that carries over month-to-month and you are just starting to budget, then it makes sense to track your credit card payment. However, if you pay your credit card balance in full each month, then by tracking all of your expenditures (including those made with your credit card) you will already be accounting for the balance and therefore you should not include the payment in your budget.
- Saving money should become a fixed regular expense in your budget, just like buying food or paying utilities. Ideally, you should strive to save at least 12% of your **gross income** (income before taxes and other deductions) as a long-term savings objective. When viewed this way, savings becomes a regular expense within your budget!

Finally, your budget should show an ending amount, or the amount your anticipated income exceeds or falls below your estimate of expenses. Hopefully, you'll have a surplus at the end of the planning period.

HELPFUL HINT

If you have a deficit over a 12-month period, even after considering student loan proceeds and withdrawals from savings accounts, then you will want to seriously reexamine your budget and see what changes you need to make to balance income and expenses.

- A **surplus** means that you have planned well and have your money working for you.
- A **deficit** indicates that your expenses exceed your income.
- As a college student, your budget from month to month may vacillate between surplus and deficit, depending on the timing of tuition payments, loan proceeds, scholarships, and other irregular expenses. However, it is important that over a 12-month period of time, you have a cumulative surplus or you at least break even (see **Helpful Hint**).
- Keep in mind that borrowing money to make your budget balance is an easy short-term fix, but that positive income from the loan proceeds will turn into an equally large expense in future years as you have to repay what you have borrowed. So, when possible, it is best to limit or avoid borrowing too much money.

Comparing Estimates with Actual Amounts

As discussed earlier, your budget is an essential financial tool that should be used frequently (most people, for example, track income and expenses on a monthly basis). Recall Step 5 of the resource management process: compare your resource use to your guidelines.

- At the end of the month, stop and determine what happened. You may have overestimated your income or underestimated expenses.
- Identify the specific cause and consider whether it was a one-time event or something that is long term in nature.
- If it looks like something might be happening on a long-term basis, it's time to revise your budget or change your spending habits.

Connection to the Balance Sheet

Your budget is connected to your balance sheet. For example, let's say that you have a car loan.

- The loan payment shows up on your budget as an expense. The balance remaining on the car loan is a liability on your balance sheet. The value of the car is an asset.

- If you were to sell your car, your net worth (a balance sheet calculation) might go down, go up, or stay the same. However, you'll notice immediately that your budget situation improves.

This example highlights the importance of thinking about income, expenses, assets, and liabilities holistically whenever possible.

Financial Ratios

Using a budget to evaluate where you are earning and spending money is invaluable. However, there are times when you need to put things into perspective. This is where financial ratios come into play. A **financial ratio** is a formula that allows you to compare your current situation to a preestablished benchmark. As shown in **Illustration 2.5.3**, there are several budgeting ratios that can be used to guide you along your lifetime financial journey.

ILLUSTRATION 2.5.3

Income and Expense Financial Ratios

Ratio	Formula	Guideline
Savings Ratio	(Household Savings + Employer Contributions to Retirement Plan)/Gross Income	>12%
Consumer Debt-to-Income Ratio	Consumer Debt Payments/Gross Income	<15%
Total Debt-to-Income Ratio	Total Debt Payments/Gross Income	<36%
Emergency Fund Ratio	Monetary Assets/Monthly Living Expenses	3 to 6 months

The Savings Ratio

The **savings ratio** indicates the percentage of money that you are setting aside on a regular basis.

- The numerator of the savings ratio includes the money you put aside from your income, plus any contributions your employer gives you for retirement, during a set time period.
- The denominator is your total income over that same time period.
- You should strive to save at least 12% of your gross income.

Consumer Debt-to-Income Ratio

The **consumer debt-to-income ratio** indicates what percentage of your income you are using to pay debt payments. You calculate this by dividing the total of consumer debt payments by gross income over the same time period.

- You should avoid spending more the 15% of your income on consumer debt payments.
- Consumer debt payments include credit cards, personal loans, car loans, boat loans, and other liabilities—basically anything other than your home.

Total Debt-to-Income Ratio

The **total debt-to-income ratio** indicates what percentage of your income you are using to pay all of your debts.

- The numerator is all debt payments, including mortgage debt and students loans, as well as all consumer debt payments, over a specific time period.
- The denominator is gross income over that same time period.
- You should have no more than 36% of income being used for debt payments.

Emergency Fund Ratio

The **emergency fund ratio** indicates whether you have sufficient resources available in case of an emergency.

- You should have resources to cover 3 to 6 months of necessary expenses.
- You can calculate necessary expenses by taking all of your expenses and subtracting out taxes, savings, and nonessential expenses (see **Helpful Hint**). At a minimum, your monthly emergency expenses should include rent or mortgage, car payments, insurance, utilities, food at home, and the bare minimum of other day-to-day expenses.
- Once you have this number, you need to determine how much you have in monetary assets. **Monetary assets** are highly liquid assets that are or could be converted to cash quickly, such as cash, savings, and checking accounts. This number comes from your balance sheet.

HELPFUL HINT

Most fixed expenses tend to fall into the emergency need category.

Concepts in Action

Hannah has created the following budget.

Item Description	Projection	Actual	+/–
Total Income	$1,100	$1,022	
Savings	50	50	
Expenses			
Rent	400	400	
Utilities	220	248	
Transportation	200	188	
Food	150	185	
Consumer debt payments	40	40	
Entertainment	40	35	
Total Expenses			
Surplus (or Deficit)			

Hannah is unsure how to interpret the budget. Answer the following questions to help her analyze it.

1. Did Hannah have a surplus or deficit for the month?
2. What is her actual savings ratio? Did she meet the guideline?
3. What is her debt-to-income ratio? Did she meet the guideline?
4. What is her emergency fund ratio, assuming that she has $2,500 saved in a bank account? Base your estimate on Hannah's budget amount. Does she meet the guideline?
5. What should be her next step when managing her resources?

Solution

1. Hannah had a deficit this month of $124. She earned $78 less income than expected, and her expenses were $46 more than anticipated.
2. Her savings ratio is 4.89% ($50/$1,022), which is below the guideline.
3. Her debt-to-income ratio is 3.91% ($40/$1,022), which meets the guideline.
4. Her emergency fund ratio is 2.37 (emergency expenses include all of her expenses, less savings and entertainment ($2,500/$1,061), which is slightly below the guideline.

Hannah can improve her situation next month by either working more and increasing her income or cutting her expenses. She also needs to determine if the cause of her deficit was a one-time event or something that is going to occur again. Over time, she should work to strengthen her financial position by using the financial ratios as benchmarks, to make the changes she needs to achieve her financial goals.

The Value of Tracking Expenses

Sometimes good things, if done too frequently, can foster unwanted outcomes. Take, for example, Sam and Irene. They are a newly retired couple. Irene and Sam are frugal by nature, and Irene loves to shop the grocery store ads. Sam and Irene never really bother making a shopping list before they go shopping, nor do they track their expenses. Sam and Irene's financial planner asked them to track their expenses for a month so that they would have a good idea of how much money should be pulled from their retirement accounts on a monthly basis. This monthly distribution is an important number because if it is too high, Irene and Sam could run out of money in their senior years. But if the monthly withdrawal is too low, Sam and Irene could run short of money on a monthly basis.

They tracked their spending for the full month. At the end of the month, Irene had a good idea of how much they were spending. But, she also learned some surprising facts about their expenditures.

- During the month, Irene sent Sam to different grocery stores 41 times to pick up something that was advertised in a store ad.
- On some days, Sam made multiple trips to grocery stores.
- On each trip, Sam saw things he wanted. He would pick up those things as well, even though they were not in Irene's grocery budget.

Before tracking expenses, Irene thought that she was saving money by buying things on sale at all of the different stores each week. Irene also thought that they were not spending much because each time Sam went to a store, he only spent about $10 or $15. However, once she tracked her expenses, she realized that $12.50 a trip, although not much at one time, adds up quickly when done 41 times! As shown in **Illustration 2.5.4**, it would have been cheaper for Irene to go twice per month to the store and spend her planned $200 per trip rather than go many times, like Sam, and spend $12.50 each time (an amount that included unplanned purchases).

ILLUSTRATION 2.5.4

How Extra Shopping Can Result in Excess Spending

Many spending habits are so routine that their cumulative impact is taken for granted. Tracking helps expose these habitual spending patterns and their cumulative impact. Once you are fully aware of these expenses, you will be able to make changes that will save you a lot of money over time.

End-of-Topic Assessment

Multiple-Choice Questions

1. Place the following resource management steps in order.

I. Comparing how you used your resources with established guidelines.

II. Tracking where your resources come from and how they are currently being used.

III. Setting and knowing your financial goals.

IV. Developing a set of guidelines regarding the use of your assets.

a. I, II, IV, and III.

b. III, IV, I, and II.

c. II, IV, I, and III.

d. III, II, IV, and I.

2. A tool that helps you determine where you actually spent your income is known as a(n):

a. net worth statement.

b. balance sheet.

c. budget.

d. income and expense statement.

3. All of the following are fixed expenses, *except:*

a car payments.

b. home mortgage payments.

c. travel and entertainment expenses.

d. student loan payments.

4. A deficit in a budget means you are:

a. earning more than you are spending.

b. saving more than what you are spending.

c. spending more than you are earning.

d. saving more than what you are earning.

5. Tara's budget shows a projected deficit. What does this mean for Tara?

a. It is impossible to have a deficit so Tara must cut expenses.

b. It means that she will need to borrow money to fund the deficit.

c. It means that she will need to sell assets to fund the deficit.

d. Either it means that she will need to borrow money to fund the deficit or she will need to sell assets to fund the deficit.

Use the following information to answer Questions 6–9.

John's Budget

Item	**Projection**	**Actual**	**Difference**
Income	$9,000	$9,000	
Rent	2,000	2,000	
Utilities	1,000	800	
Taxes	3,000	3,100	
Transportation	500	700	
Food at home	400	300	
Food away from home	500	800	
Debt payments	1,200	1,200	
Savings	400	25	
Total Expenses			
Surplus (or Deficit)			

6. **Calculate** Given John's monthly budget and his actual income and expense information, which of the following statements is *true*?

a. John ran a $225 deficit for the month.

b. John ran a $75 surplus for the month.

c. John ran a $75 deficit for the month.

d. John ran a $225 surplus for the month.

7. What expense was John least accurate in projecting for the month?

a. Transportation.

b. Food at home.

c. Food away from home.

d. Taxes.

8. Which of the following statements is *true*?

a. John is doing a good job managing his resources according to his budget.

b. Although John did not exceed his budget, he was not able to save as much as projected.

c. John is doing a poor job managing his resources given the monthly deficit in spending.

d. Although John did exceed his budget, he is financially stable because of his excess savings.

9. **Calculate** What is John's approximate budgeted savings ratio?

a. 1%. **c.** 4%.

b. 3%. **d.** 10%.

10. Nicholas is a 30-year-old divorced father of two. He works for a civil engineering firm as a project manager. He currently is unable to save money, although he does not run a monthly budget deficit. The value of his assets barely exceeds the total of his debts and liabilities. Which of the following is an attainable goal for Nicholas?

a. Retiring in 15 years with a high standard of living.

b. Purchasing a moderately priced new car in 3 years.

c. Buying a new home next year.

d. Both purchasing a moderately priced new car in 3 years and buying a new home next year.

Adventures in Personal Finance

Short Answer

1. Determine which of the following statements are true about managing resources. If false, indicate why.

- **a.** Having clear financial goals is the first step in managing your money.
- **b.** Setting up spending guidelines, or a budget, is the first step in managing your money.
- **c.** Tracking expenses and setting up a budget is the same thing.
- **d.** Most people know exactly how they spend their money each month, regardless of whether they track their expenses.
- **e.** Savings is an essential element of any budget.
- **f.** Managing your money is only necessary during your working years or while you are preparing for retirement; once retired, you will no longer need to monitor your spending.

2. Take a moment to look at Hannah's budget in the Concepts in Action box. You can see that she overspent on food. How could the budget help Hannah better manage her spending on food?

3. Although it takes some work, tracking expenses on a weekly or sometimes a daily basis can be helpful. Describe why this would be a good recommendation to follow. Specifically, what is the problem with compiling your expenses at the end of the month and comparing the results to what you had budgeted for that month?

Explore

1. **Presentation** There are many ways that you can create and track a budget. Several websites, smartphone and tablet apps, and software programs make it easy by doing the math for you. Some services automatically link all of your financial accounts (bank accounts, credit cards, and the like) to your budget, so that you can see how much money you have left in each of your budget categories. Conduct an Internet search and identify six different methods of budgeting and tracking your expenses. List the pros and cons associated with each method, and identify one that you would use for yourself. Be sure to share the results of your research with others in your class.

2. A group of college students was asked to track their expenses for a 3-month period. At the end of each month, the students were asked to write a short response to the question: "Is my spending consistent with my personal values?" During this 3-month period, they were also asked to set some personal financial goals and to set up a budget the last month. At the end of the 3 months, more than 75% of students reported becoming aware of problematic spending habits that they had not realized they had prior to tracking their expenses. Additionally, 60% of the students who realized that they had problematic spending behaviors were able to change their behavior during the 3-month period. The most commonly reported spending-problem areas were eating out, alcohol, and clothing. Fortunately, students also reported the most improvement in their spending in these same areas. Do you think college students in general would identify these same problem areas? What do you identify as your spending-problem areas?

Expanded Learning Activity

Writing **Presentation** Do a quick survey of 20 students and find out how many of them track all of their expenses. Also ask them what they think the biggest challenge with budgeting and tracking is. See if they have come up with any solutions. Summarize your findings in a one- to two-page paper and share it with your classmates.

Your Financial Plan

LO 2.6 Describe how to create a personal financial plan.

Most of us dream about vacations, letting our imaginations take us to all sorts of locations. But planning one is a different process: we need to be more realistic and consider how much time and money we have. We therefore need to narrow our focus from limitless choices to a more defined set of options. From there, we can create a plan.

Similarly, you have come to an important point in thinking about your lifetime financial journey. You have now thought more realistically about where you are today financially and where you hope to be in the future. It's time to begin creating your financial plan.

Overview of a Financial Plan

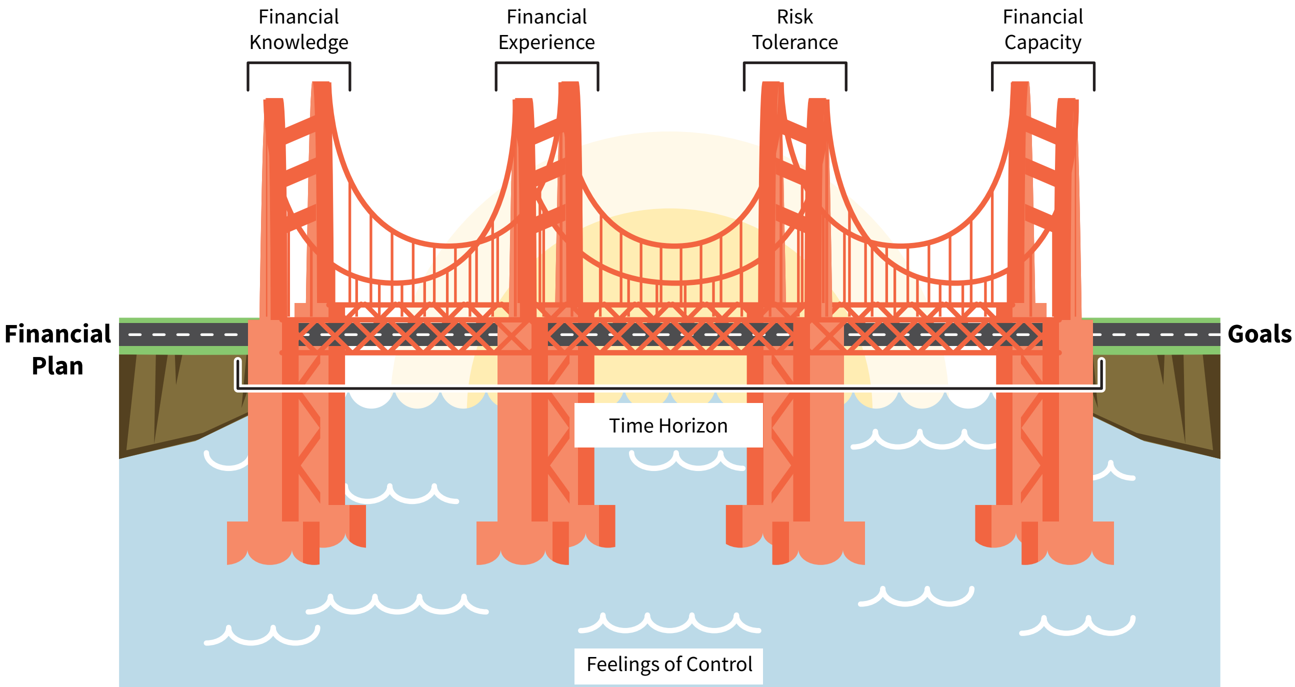
You have now learned about both internal and external finance topics. Together, internal and external finance concepts serve as the foundation of your financial journey. More importantly, you can combine the elements of each to begin creating a financial plan.

Financial Plan Elements

Illustration 2.6.1 shows the six elements that go into making an effective financial plan. Together, your financial knowledge, experience, feelings of control, risk tolerance, financial capacity, and time horizon can be blended in a way to help you reach your financial goals.

- Your financial plan is therefore unique to you.
- Your financial plan is also a flexible document or financial roadmap. You should expect things to change over time.

ILLUSTRATION 2.6.1 **Elements That Shape a Financial Plan**



- The plan is simply a tool to help guide you and keep you on track during your lifetime financial journey.

Influence of Financial Plan Elements

Let's look at these six elements more closely. Do you see how, as shown in Illustration 2.6.1, financial knowledge, financial experience, risk tolerance, and financial capacity form the structural support of your financial plan? It turns out that these four elements form the foundation of any long-lasting financial plan. Your feelings of control (that your choices determine your future versus outside forces) and time horizon, on the other hand, are more fluid over time. These elements tend to change based on your financial situation and particular financial goal.

To see how these six factors influence an individualized financial plan, we'll next help to create one for Andi, a recent college graduate.

Creating a Financial Plan: The Six Steps

The creation of a financial plan follows the process shown in **Illustration 2.6.2**. You can use this process to develop a financial plan to reach a single goal, or you can combine multiple goals to create a lifetime financial plan.

ILLUSTRATION 2.6.2

Six-Step Process Used to Develop a Financial Plan

Set a Financial Goal

Before you can develop a financial plan, you need to define your goal(s). Here's what Andi said is her number-one financial goal:

- To save money for a down payment on a house.

Think about this goal from the framework of SMART goals: **S**pecific, **M**easurable, **A**ttainable, **R**ealistic, and **T**imely. As currently stated, Andi's goal is not very SMART. Why? It is too vague. Instead, Andi's SMART goal might be better framed as:

- To save $50,000 in 5 years for the down payment on a $250,000 house.

Andi now knows specifically how much she needs to save, when the money needs to be available, and for what purpose. The goal is reasonable and appropriate for someone who is young and just starting her lifetime financial journey.

Know Your Starting Point

Just like thinking about an extended vacation, before you can create a financial plan and figure out where you want to go and how to get there, you need to have a good understanding of your starting point. This means taking an inventory of your human and financial capital and personal attributes and attitudes. At this step in the plan-development process, Andi knows the following:

- She is 24 years old, single, and employed full-time as an occupational therapist.
- She currently earns slightly less than the median pay for occupational therapists: $70,000.
- She and her dog, Katy, plan to live in the area for at least the next 10 years.

This is great information to know about Andi. Basically, this confirms that her savings goal is not only specific and measurable but also likely attainable (she earns a good salary), realistic (she needs housing and wants to live in the area for a relatively long time), and timely (she knows when she needs the money and she is ready to start saving now).

HELPFUL HINT

Those with greater financial knowledge tend to make better financial decisions and take appropriate risks, but can be prone to overestimating their skills.

Determining Your Financial Score

To effectively create a financial plan, you need to know your **financial score**, which will provide you with a realistic understanding of your current risk tolerance, financial knowledge, and feelings of control (see **Helpful Hint**). How do you measure these internal finance elements? One way is to take a series of short questionnaires, such as those in **Illustrations 2.6.3, 2.6.4**, and **2.6.5**.[1]

ILLUSTRATION 2.6.3 **Risk-Tolerance Assessment**

Circle the number that most closely corresponds to your reaction to each phrase.	Strongly Agree	Tend to Agree	Tend to Disagree	Strongly Disagree
I would prefer a sure gain of $500 over a 50% chance to gain $1,000 and a 50% chance to gain nothing.	1	2	3	4
Investing is too difficult to understand.	1	2	3	4
I am more comfortable putting my money in a bank account than in the stock market.	1	2	3	4
When I think of the word *risk*, the term *loss* comes to mind.	1	2	3	4
Making money in stocks and bonds is based on luck.	1	2	3	4
In terms of investing, safety is more important than returns.	1	2	3	4
The thought of taking a risk is exciting to me.	4	3	2	1
				What is your score? ___________

ILLUSTRATION 2.6.4 **Financial-Knowledge Assessment**

How much do you know about the following?	Nothing	Very Little	Some	A Fair Amount	A Lot
Interest rates, finance charges, and credit terms.	1	2	3	4	5
Credit ratings and credit files.	1	2	3	4	5
Managing finances.	1	2	3	4	5
Investing money.	1	2	3	4	5
Information on my credit report.	1	2	3	4	5
					What is your score? ___________

ILLUSTRATION 2.6.5 **Feelings-of-Control Assessment**

How often do you feel . . . ?	Almost Never	Seldom	Sometimes	Often	Almost Always
There is really no way I can solve some of my problems.	1	2	3	4	5
I am being pushed around in life.	1	2	3	4	5
There is little I can do to change the important things in my life.	1	2	3	4	5
I can do anything I set my mind to.	1	2	3	4	5
What happens to me in the future depends on me.	1	2	3	4	5
Helpless in dealing with the problems of life.	1	2	3	4	5
I have little control over the things that happen to me.	1	2	3	4	5
					What is your score? ___________

[1] The financial-knowledge and feelings-of-control assessments were adapted from V. G. Perry and M. D. Morris, "Who Is in Control? The Role of Self-Perception, Knowledge, and Income in Explaining Consumer Financial Behavior," *Journal of Consumer Affairs* (39, 2005), pp. 299–313. The financial risk-tolerance assessment was adapted from J. E. Grable and S. Joo, "A Further Examination of Financial Help-Seeking Behavior," *Financial Counseling and Planning* (12, 2001), pp. 55–56.

Calculating Your Financial Score

After taking all the questionnaires, just add the scores from the risk-tolerance (Illustration 2.6.3) and financial-knowledge (Illustration 2.6.4) assessments, and then subtract the score from the feelings-of-control questionnaire (Illustration 2.6.5). **Illustration 2.6.6** can be used to evaluate the resulting financial score.

- A score of ≤10 means that you may have some difficulty controlling spending, paying bills on time, planning for the future, saving money, or not feeling in control of your current financial situation. Think of it this way. Some people are prepared to take a cross-country car trip: long, expensive, and sometimes challenging. Others may just not be ready at this time for such a trip. They would be better off planning for and taking an overnight vacation just a few hundred miles away from home. If your score is low, you may be more like these latter vacationers. You still need a plan, but your financial goal(s) may be focused on building capacity for a long journey in the future.
- A score of 11 to 15 indicates that it is time to start thinking about building a long-term financial plan. Although you might not be ready for a cross-country journey quite yet, you have many of the tools and resources in place that can be used to get your lifetime financial journey started immediately.
- If your score falls in the range of 16 to 20, you're ready to put a long-term financial plan in place. Your knowledge and confidence has put you in a position to begin saving and investing immediately in a way that can jump-start your lifetime financial journey.
- A score of >20 is where you want to be ultimately. If you have a score of 20 or higher, there's nothing holding you back from developing aspirational financial goals. You should be able to easily conceptualize what your financial future looks like. You probably already know what your ultimate financial dream is, and you are in a good position to start making that dream a reality.

ILLUSTRATION 2.6.6

Financial Score Evaluation

Score	Interpretation
>20	Excellent job of managing financial behaviors
16–20	Good job of managing financial behaviors
11–15	Acceptable job managing financial behaviors
≤10	Some difficulty managing financial behaviors

Andi completed the three questionnaires with the following scores: Risk Tolerance = 19; Financial Knowledge = 18; and Feelings of Control = 14. Her *financial score* therefore came out to 23 (19 + 18 − 14). Given her score, Andi has the building blocks in place to make her SMART goal happen.

Concepts in Action

Afra and Stephan have been married for 3 years. Afra is ready to start actively saving for a new home and for their later retirement. Last week, she and Stephan completed the three questionnaires at the same time (although they did not talk about their answers until after they were finished). Afra scored 13, 20, and 10. Stephan scored 21, 20, and 22. What do their scores tell you about their readiness to continue on their financial journey as a couple?

Solution

Several things stand out. First, Stephan's financial-risk tolerance is significantly higher than Afra's. Second, Stephan holds an external locus of control, meaning he believes that financial and life outcomes are the result of luck and fate, whereas Afra is more likely to attribute outcomes to her own efforts. Their overall individual scores, however, are relatively close (23 and 19). Afra's score suggests that she is ready to move forward toward goal development and achievement. Stephan is also ready, but he should take some time to think about how his behaviors can directly affect future outcomes.

Determine Your Financial Capacity

HELPFUL HINT

Think of financial capacity as having a spare tire, extra fuses, and maybe even an extra supply of gas ready when you start out on a long-distance drive.

When you create a financial plan, you need to make sure that you have sufficient financial capacity, that is, the ability to keep moving forward toward goal achievement even if you face a few financial challenges or emergencies along the way (see **Helpful Hint**). You can measure your financial capacity using the tools presented in this chapter: a budget, balance sheet, and financial ratios.

Illustration 2.6.7 shows a simple questionnaire to gauge your financial capacity. You may need to review the financial statements you developed previously in the chapter to finish this questionnaire. If you do not yet know the answer to one or more of these questions, indicate "no" as your answer.

ILLUSTRATION 2.6.7

Determining Financial Capacity

Do You Have:	Yes	No
1. A positive net worth?	1	0
2. An emergency fund equal to 4½ months of living expenses?	1	0
3. Savings ratio equal to 10% of annual gross income?	1	0
4. Adequate life insurance in place and funded?	1	0
5. A current ratio equal to or greater than 1.00 (Monetary Assets/Current Liabilities) and debt ratio less than 0.39 (Total Liabilities/Total Assets)?	1	0
What is your score? ___________		

Source: J. E. Grable, "RiskCAT: A Framework for Identifying Maximum Risk Thresholds in Personal Portfolios," *Journal of Financial Planning* (*21*(10), 2008), pp. 52–62.

A score of 0 represents a low level of financial capacity, whereas a score of 5 indicates high financial capacity. Let's see how Andi scored:

- Andi scored a 4. The reason her score is not higher is because she currently has only about 2 months of living expenses in an emergency fund.
- But Andi is a diligent saver and thinks that she can build her emergency savings quickly over the next few months.
- It turns out that Andi is in good financial shape overall. She has already saved about $9,000 toward her home purchase goal.
- If Andi is hit with an unexpected financial need before her emergency fund is fully established, she can dip into this savings.

Overall, Andi's financial capacity is relatively high. If it were lower, she would need to go back and build her capacity before moving on to funding her goal. Right now, however, Andi is ready to think about ways to save the additional $41,000 needed over the next 5 years.

Know Your Time Horizon

Now is the moment to determine if the time horizon associated with a financial plan is realistic. How can you or Andi know the answer to this question? In the final analysis, the success or failure of a financial plan comes down to one thing: balancing risk and return in savings and investments. We'll discuss these two topics in detail throughout the remainder of this text. For now, however, let's focus on how Andi's time horizon matches up with her savings need.

Andi plans to save 10% of her income every year ($7,000). Let's see if that will allow her to save $41,000 in 5 years (this is where time value of money calculations come in handy):

- Andi estimates she can earn an 8% rate of return.
- Andi calculates the future value of an annuity formula to determine if the savings amount will be enough: $\{(PMT/I) \times [(1 + I)^N - 1]\}$ or $\{(\$7{,}000/0.08) \times [(1 + 0.08)^5 - 1]\} = \$41{,}066$.

It turns out that Andi's goal can be funded! Keep in mind, however, that if she earns less than 8%, her goal achievement becomes problematic. If she can earn a higher return, she might be able to buy a bigger house or put down a larger down payment.

Formalize and Implement Your Financial Plan

At this point, you're now ready to formalize and implement your financial plan. Without proper implementation, you'll find it very difficult to achieve your financial goals. Andi formalizes her financial plan as follows.

- Andi's plan is to save $41,000 over the next 5 years, so she can buy a $250,000 house with a $50,000 down payment. Andi already has $9,000 saved for this goal.
- For this plan to work, she needs to obtain an annualized 8% rate of return. Throughout the remainder of the text, you will learn about ways you and Andi can save and invest money to achieve this or a similar rate of return.
- Andi also needs to keep her emergency savings in a safe and secure account. However, given her relatively high risk tolerance, solid financial capacity, and reasonably long time horizon, she can afford to take more risk with her down payment savings.

The success of any journey—be it financial or an exciting vacation—begins with thorough planning. For those who have the internal finance attributes to begin their lifetime financial journey and the external finance capacity to begin funding goal achievement, creating a financial plan is something that can begin today. This is certainly true for Andi, and it can be true for you, too!

End-of-Topic Assessment

Multiple-Choice Questions

1. All of the following are building blocks of financial success, *except:*

a. lack of experience.
b. an appropriate level of risk tolerance.
c. feeling of control over life's outcomes.
d. a reasonable time horizon.

2. When Uma thinks about risk, the first thing that comes to mind is excitement. Uma is likely:

a. very risk-tolerant.
b. somewhat risk-tolerant.
c. somewhat risk-averse.
d. not at all risk-tolerant.

3. The financial plan element(s) that fluctuates over time and may change based on the situation or goal is:

a. financial capacity.
b. time horizon.
c. feelings of control.
d. financial capacity and time horizon.

4. Generally, those with the greatest financial knowledge tend to:

a. make the best financial decisions.
b. take appropriate risks.
c. overestimate their skill.
d. make the best financial decisions, take appropriate risks, and overestimate their skills.

5. A goal should be:

a. measurable.
b. attainable.
c. specific.
d. All the answer choices are correct.

6. Which of the following is an example of a SMART goal?

a. Retiring at age 65 with enough money to live comfortably.
b. Purchasing a new 65-foot sailboat in 3 years.
c. Starting a business in a few years that will generate $300,000 in net sales.
d. Saving $75,000 for the down payment on a home that will be purchased in 4 years.

7. Your ability to withstand the negative effects of financial shocks is called:

a. risk tolerance.
b. financial capacity.
c. risk aversion.
d. risk scoring.

8. **Calculate** Buckley has the following assets and liabilities: $3,000 in a savings account, $45,000 in stocks, $2,000 in credit card bills, and a car loan of $33,000. Given this information, what is Buckley's current ratio?

a. 0.67.
b. 0.73.
c. 1.37.
d. 1.50.

9. The advantage of having a high-risk capacity is that it:
   - **a.** allows someone to take more risk to meet a goal.
   - **b.** allows someone to take less risk than is required to meet a goal.
   - **c.** offsets a low debt ratio.
   - **d.** reduces the need for a large emergency fund.

10. **Calculate** Linda needs to save $50,000 over the next 5 years. If she can save $6,000 per year and earn an 11% rate of return on an annualized basis, by how much (approximately) will she exceed or fall short of her goal?
   - **a.** She will exceed the goal by $13,367.
   - **b.** She will exceed the goal by $35,241.
   - **c.** She will fall short of the goal by $12,633.
   - **d.** She will fall short of the goal by $35,241.

Adventures in Personal Finance

Short Answer

1. Describe the attributes of a SMART goal within a financial plan.
2. **Calculate** Ana recently calculated her financial score. She was stunned to see how low it turned out to be. Undaunted, Ana is determined to turn her financial situation around. To do this, she has set a financial goal to create an emergency savings fund. She can save $300 per month ($3,600 per year). She would like to accumulate $15,000 over the next 4 years. If Ana can earn a 3% rate of return on her yearly savings, do you think she will accomplish her goal?
3. **Groupwork** **Presentation** As a class, split into groups of three or four students. As a team, discuss ways someone can gain experience in the financial marketplace if she or he has limited resources. Be sure to come together as a class and discuss each group's insights.
4. **Writing** Write a short reaction paper about the following statement: "The longer the investment time horizon, the more investment risk that can be taken in the financial plan." In your paper, include your thoughts about whether you agree with this statement and what impact the outcome of this statement has on the types of investments someone with a long time horizon should select when building a portfolio to achieve her or his goals.
5. **Groupwork** As you have been learning throughout this text, obtaining a base level of financial literacy is only the starting point in your financial life journey. However, for at least part of your life, you probably won't be making that journey alone. For this assignment, find a partner (e.g., classmate, friend, relative, or significant other) and ask him or her to complete the three questionnaires in this topic. Calculate his or her score and compare it to your own. What does your partner's score tell you about his or her financial readiness? When viewed together, what do your combined scores tell you about how you might work as a team to reach future financial goals?

Explore

1. **Writing** Conduct an Internet search using the following phrase: "personal finance and locus of control." Visit at least three sites that match the search phrase and read the material. Write a brief reaction paper describing your findings. Specifically, does there appear to be a relationship between a person's locus of control and the way household financial resources are managed?
2. You saw how easy it was for Andi to put together a financial plan—a roadmap to financial goal achievement—in this topic. Use the six-step financial plan development process to create your own financial plan to meet at least one goal. Your financial goal can be anything you like, including paying down debt, saving for a spring break trip, buying a car or house, planning for retirement, or any other objective that meets the requirements of a SMART goal.

Expanded Learning Activity

Writing As you have been learning throughout this text, obtaining a base level of financial literacy is only the starting point in your lifetime financial journey. You may desire to continue your education into graduate school, start a business, or purchase a home quickly. Thinking of your next major step in your financial journey, develop a financial plan that will map out how you will achieve the financial aspects of your goal. For example, if your next step is to attend graduate school, how much will the schooling cost (tuition, housing, etc.), where will it be, what financial aid (if any) is available, and what will you need to do to be ready for it? If part of your financial plan for graduate school is to take out student loans, how much debt will you acquire and what will your payments be when it comes time to repay the student loans? Use the Internet to answer these questions. Write a two- to three-page summary of your financial plan for the next major milestone of your life.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

2.1 Discuss the role of compound interest in managing your finances. Albert Einstein is reported to have said that compound interest is the Eighth Wonder of the World; the manner in which rabbit populations grow is similar to the way money can grow if proper management techniques are used. Those who understand how time can help accelerate wealth accumulation tend to be willing to postpone current expenditures for gains tomorrow. It is the principle of compound interest that will help you achieve your life dreams and financial goals. Compound interest is the tool that helps create wealth over long periods of time for those who save and invest wisely.

2.2 Identify how time value of money concepts affect financial goals and decisions. Exhibiting a core competency in time value of money calculations is an essential tool for those wanting to become better financial managers. Although TVM calculations are important to know and practice, a bigger takeaway from understanding TVM formulas is the concept that a dollar today is worth more than a dollar tomorrow. In practice, this means that you must take steps to keep pace with inflation by saving and investing wisely.

2.3 Calculate the effect of time and interest on financial decisions pertaining to planning, investing, and borrowing. There are several ways to calculate TVM problems. Once you have developed a competency in understanding how compound interest works, you can use these techniques to determine the present or future value of a lump sum or series of payments. You can also use TVM formulas and tables to estimate payments needed to pay off loans and other debts. Regardless of the method used, being confident in basic TVM calculation approaches in an important element of financial literacy.

2.4 Describe how to use a balance sheet as a financial-management tool to track changes in assets, liabilities, and net worth. A balance sheet is designed to keep track of assets and liabilities. A balance sheet is an essential tool for anyone who wants to reach his or her financial goals. When you create a balance sheet, it is important to remember to document the market value of assets owned as well as the total amount owed on liabilities. The outcome associated with a balance sheet is net worth, or assets minus liabilities.

2.5 Explain how to use a personal budget to track and forecast cash flow to achieve financial goals. Tracking income and expenses and using financial ratios to document how well you are doing in reaching financial goals is important. A budget is one indispensable personal financial tool that can be used for this purpose. Unlike a balance sheet that is used to record assets and liabilities, a budget is a tool to document what you expect to earn (income) and spend (expenses) during a specific time period. Generally, financial planners recommend that individuals create monthly budgets to project income and expenses. The outcome of the budgeting process is an estimate of a monthly surplus or deficit. The goal is to generate a monthly budget surplus that can be saved and invested.

2.6 Describe how to create a personal financial plan. When you begin to think about where you ultimately want to be financially in the future, you are really beginning to formulate a financial plan. Your financial plan is built on accomplishing at least one financial goal. Your personal financial plan should incorporate six elements: financial knowledge, financial experience, risk tolerance, financial capacity, feelings of control, and time horizon. If you are young and just starting out on your financial journey, you may not have much financial experience or financial capacity, but you do have a long time horizon. Your time horizon will allow you to maximize investment returns over time. If you have a shorter time horizon but have other elements needed for a successful lifetime financial journey—risk tolerance and financial capacity—then you too can invest to reach your goal(s). Ultimately, each person's financial plan is unique, as is each person's financial journey. In many ways, your financial path is ever-changing and dynamic. To reach your financial dreams, you will need to stay focused on the future and invest in yourself.

Continuing Case: Tarek's Financial Journey

In Chapter 1, you had a chance to meet Tarek. Beginning with this chapter, you will have an opportunity to assist Tarek as he begins to navigate his financial journey. Recall that Tarek is 26 years old and single, although he is in a committed relationship with his girlfriend Samantha. Let's help Tarek begin his financial journey. Tarek has prepared the following monthly budget and a balance sheet for your review.

Tarek's Personal Monthly Budget

	Budget	Actual
Income	$3,900	$3,900
Interest	90	75
Total Income	$3,990	$3,975
Taxes	$ 883	$ 883
Rent	850	850
Vehicle insurance	200	200
Food and eating out	290	320
Car payment	395	395
Student loans	298	298
Sports and hobbies	240	300
Phone and household	100	135
Retirement	156	156
Vacations	300	300
Credit cards	275	275
Total Expenses	$3,987	$4,112
Surplus (or Deficit)		

Tarek's Balance Sheet	
Assets	
Checking	$ 350
Savings	1,100
Automobile	11,000
Motorcycle	3,750
Furnishings	800
Clothes	2,100
Other household	900
Sports equipment	2,500
Collections	750
401(k)	19,000
Total Assets	$42,250
Liabilities	
Credit cards	$ 3,500
Student loans	25,900
Car loans	3,000
Total Liabilities	$32,400

Instructions

Use the information in these documents to answer the following questions.

- **a.** How close is Tarek to meeting his monthly spending plan? Is there anything that he can do to improve his situation?
- **b.** What is Tarek's current net worth? How does this compare, in general, to others his age?
- **c.** What is Tarek's budgeted savings ratio? Does this meet the guideline discussed in the chapter?
- **d.** How well is Tarek managing his debt? Be sure to calculate the current ratio, debt ratio, debt-to-income ratio, and the long-term debt coverage ratio when answering this question.
- **e.** If Tarek were to lose his job, how long could he live, assuming he cut back expenses to only essential items? Has he met the guideline discussed in the chapter?

Calculating the Cost of Life's Financial Journey

Theba and Marek have been married for nearly 20 years. They are both 45 years of age and have two children in high school. They are concerned about how to fund their future retirement costs, as well as how to help their children pay for college.

Instructions

Answer the following questions.

- **a.** Assume that Theba and Marek have a combined annual income of $95,000. Also assume that they want to retire at age 67. If inflation—or the annual cost of living—increases by 3% per year, how much will they need to earn at retirement to maintain their current standard of living?
- **b.** Marek is interested in purchasing a second home overlooking a mountain lake. He believes that they should buy this home soon, make payments while they are working, use it for vacations, and move into the house permanently once they retire. If they need a down payment of $35,000, how much should they save annually over the next 7 years? Assume that they can earn 7% on their annual savings.
- **c.** Their daughter, Chyna, is interested in attending a prestigious college. The annual tuition, plus room and board and other fees, is about $65,000 per year. College costs are increasing at a 5% rate per year. The college typically awards scholarships and grants for applicants with a household income of $95,000 equal to 70% of the total cost of college. Help Theba and Marek determine how much college will cost, based on this information and assuming that Chyna is 15 years of age and will start college at age 18.
  1. What will be the total cost of college when Chyna starts?
  2. How much will Theba and Marek need to pay when Chyna starts college?
  3. Based on your answer, how much will they need to save per year starting today to fund one year's worth of net college expenses if they can earn 7% APY on their savings?

Planning for the Future

Marie is a senior in college and has just received an exciting job offer. Her starting salary will be $40,000 per year. The total amount of taxes (federal, state, FICA, etc.) withheld from her paycheck annually is $8,700, leaving Marie with $31,700 of net income. Marie has a car loan with monthly payments of $150, and she also has a student loan that will have monthly payments of $150.

Instructions

Using the above information, determine a realistic monthly budget for Marie that allows her to accomplish the following.

- **a.** Meet her current living needs for housing, utilities, phone and Internet, transportation, clothing, and other necessary expenses.
- **b.** Repay her debts.
- **c.** Prepare for the future.
- **d.** Based on what you recommend to Marie, will she be able to enjoy her current life style, repay her debts, and prepare for the future? If you could recommend to Marie to do one thing, what would it be?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER **3**

Earnings and Income: The Building Blocks of Your Financial Journey

Hero Images/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

3.1 Discuss how to create wealth through increasing income, limiting expenses, and investing in your human capital.

3.2 Identify the different forms of employee earnings.

3.3 Compare the financial pros and cons of self-employment and ways to structure a business.

3.4 Discuss the sources and characteristics of unearned income.

3.5 Explain how to use capital assets to produce income and build wealth.

3.6 Explain financial safety-net programs available to employees and citizens.

Gaining access to sources of income and then wisely using the income provides the foundation for a sound financial plan. In this chapter, each topic will illustrate the primary ways you will likely earn money over your lifetime. Of course, wages and salaries top the list, but you also need to be familiar with other ways to generate income, such as self-employment, dividends and interest, capital gains, and government transfers. The topics in this chapter will also provide guidance on the difference between *earned* income—money that you receive from your work and efforts—and *unearned* income—money that is earned from assets you own.

The Real Cost of Summer Vacations

Consider a *Wall Street Journal* article by Brett Arends, "How Summer Can Change Your Future." The article analyzed whether a student's academic major, GPA, SAT score, or other factor was

the most important in obtaining a good position after college graduation. It turns out that English or history majors may be more likely than business graduates to get a job offer if they also have a relevant internship on their résumé. Those students who make seemingly small investments in their human capital by gaining work experience often reap big returns in the job market.

Wow! This hints at a surprising insight about earning money. Further, as pointed out in the *Wall Street Journal* article, students with a 4.0 GPA who spend summers touring Europe may end up earning less over their lifetime than diligent students who work summers as interns. As you will see in this chapter, the simple decision to work and save a few dollars today may have a huge financial payoff later in life.

Before we move forward, it might be helpful to test your understanding of some key tools that help to determine earnings and income. Answer the following questions to gauge your current knowledge.

What Do You Know About Wealth?

1. How much should a young person plan to save from each and every paycheck?

a. 4%. **c.** 10%.

b. 7%. **d.** 12%.

2. The term *income* actually refers to:

a. earned income. **c.** total income.

b. unearned income. **d.** planned income.

3. If you know the basis price of an asset and the price you sold the asset for in the market, you can calculate:

a. selling costs. **c.** profit or loss.

b. gross domestic product. **d.** sales taxes.

4. Who may be eligible for a refundable tax credit when they file their taxes?

a. Needy families. **c.** Children under the age of 3.

b. The top 1%. **d.** No one.

5. To accumulate wealth, most people must be a(n):

a. lender. **c.** coupon clipper.

b. investor. **d.** borrower.

How did you do? Here are the correct responses: 1. d, 2. c, 3. c, 4. a, and 5. b.

If you answered three or more questions correctly, you'll likely find the material in this chapter a good reminder of positive behavior. If you guessed at most of the questions, you'll find the material in this chapter really valuable. In either case, this chapter will help you as you progress on your lifetime financial journey.

Income: Produce More Than You Spend

LO 3.1 Discuss how to create wealth through increasing income, limiting expenses, and investing in your human capital.

You probably know someone who always seems to be borrowing money from other people. These individuals often are spending more money than they earn and need to rely on borrowing to help bridge the gap. All of us need to borrow money at some time or another, yet always asking for money can negatively affect self-confidence and challenge friendships. Not only are there real financial problems with spending more than is earned, but overspending can also lead to emotional and social conflicts as well.

If you are like many young people, cutting back on spending is difficult because your current income may barely cover your basic living needs. You want to make sure, though, that this short-term situation doesn't become a way of life. How you manage your wealth, including your ability to generate more income while keeping your expenses steady, is really important as you navigate your lifetime financial journey. In this topic, we discuss how you can generate more income than you spend as the first step to accumulating wealth and reaching your financial goals.

Creating Wealth

To accumulate wealth, you need to generate a surplus. As the formula in **Illustration 3.1.1** shows, a **surplus** is simply the money left over after all your expenses have been paid, that is, income ($47,000) less living expenses ($42,000). Your goal should be to always generate an income surplus. This is the primary way for you to build wealth over your lifetime, as you can invest your surplus to make even more money.

ILLUSTRATION 3.1.1

Generating a Surplus

Sustainable Living	
Income	$47,000
− Living expenses	− 42,000
= Surplus (available for saving and investing)	$ 5,000

Using an Income Surplus to Create Wealth

Let's take a look at how a surplus generates wealth accumulation. Say you earned $47,000 last year. After calculating all your fixed and variable expenses for the year—using a budget—you estimate that you spent $42,000 (including taxes and savings into an emergency fund and retirement plan). This means that you have an income surplus of $5,000 (see **Helpful Hint**).

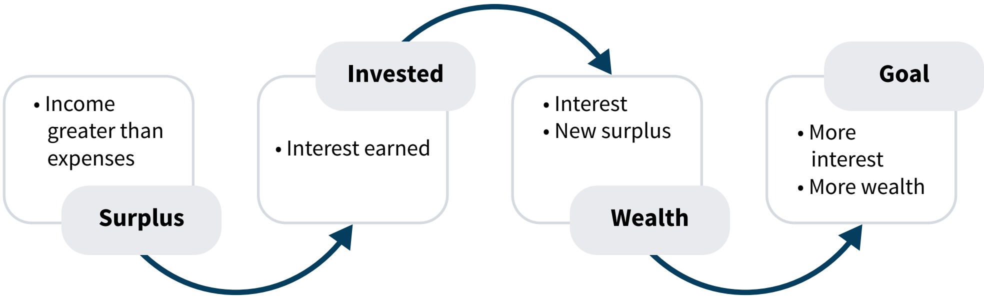
HELPFUL HINT

Although the size of the surplus certainly matters, the most important thing is that you have extra money that can be saved and invested.

- **Illustration 3.1.2** shows how you can take your surplus, invest it, and earn interest.
- As the interest adds up and as you add future surpluses, your wealth will grow even larger.
- This is how wealth not only accumulates but actually also accelerates over time. (We will discuss your targeted savings ratio in the next section, which can help you determine how much of an income surplus you should have and what to do with it.)

ILLUSTRATION 3.1.2

The Process of Turning Income Surplus into Wealth

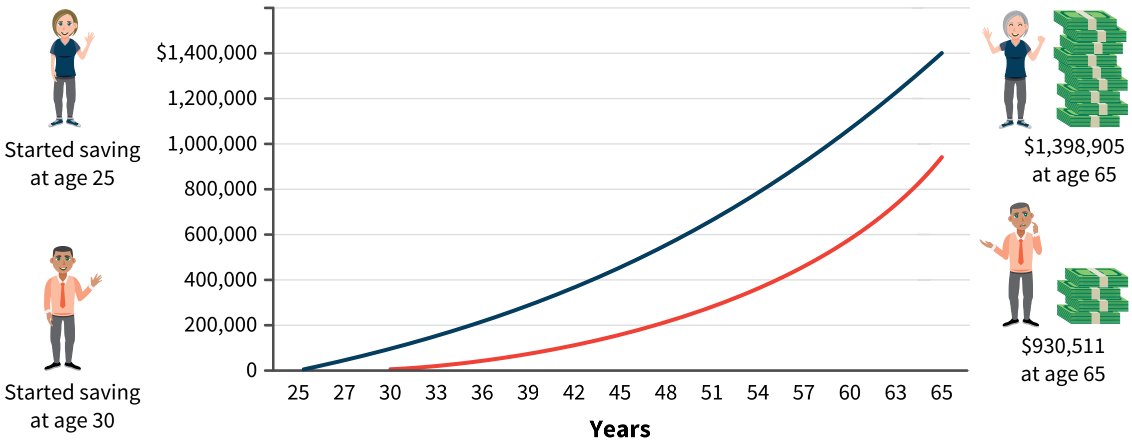


The results associated with coupling the power of time and savings can be powerful. Take a look at **Illustration 3.1.3**.

- If you save $5,000 at the start of each year from age 25 to age 65 (that is, for 40 years) at a return of 8% annually, you will accumulate $1,398,905.
- Now look at the red line to see what happens if you wait until age 30 to start saving $5,000 per year at a return of 8% annually. You'll only accumulate $930,511, which is $468,394 less than if you began saving at age 25.

The takeaway is this: Strive to generate a surplus, begin saving the surplus as early as possible, and keep your money working for you as long as possible.

ILLUSTRATION 3.1.3 **The Power of Saving Early in Life**



The Dangers of an Income Deficit

Let's now consider the flipside—failing to generate a surplus. Paul makes $94,000 but has expenses of $97,000. As shown in **Illustration 3.1.4**, Paul will run a **deficit** (when expenses exceed income) of $3,000.

- Continuously incurring deficits is unsustainable and can lead to extreme financial stress, such as bankruptcy.
- When deficits occur in your budget for schooling, training, transportation, etc., action should be taken. You need to increase income and/or decrease spending to cover the deficit. Be sure that deficits do not continue to occur and derail you from building financial wealth. Emergency savings should be in place to minimize these types of deficits.

ILLUSTRATION 3.1.4

Deficit Spending

Deficit Living	
Income	$94,000
– Living expenses	–97,000
= Deficit (reduces future consumption and opportunities)	$ (3,000)

Like many people, Paul funds his income deficit by racking up charges on his credit card, which in turn leads to more debt. **Illustration 3.1.5** depicts this downward-spiral process.

1. Overspending leads to more borrowing, whether as a loan or as credit card charges.
2. Rather than earning interest on savings from an income surplus, borrowers will end up paying more interest each month.
3. This interest, plus the continued overspending, will require more borrowing, more interest payments, and so on.
4. This will quickly deplete wealth over time and make it more difficult to achieve long-term financial goals.

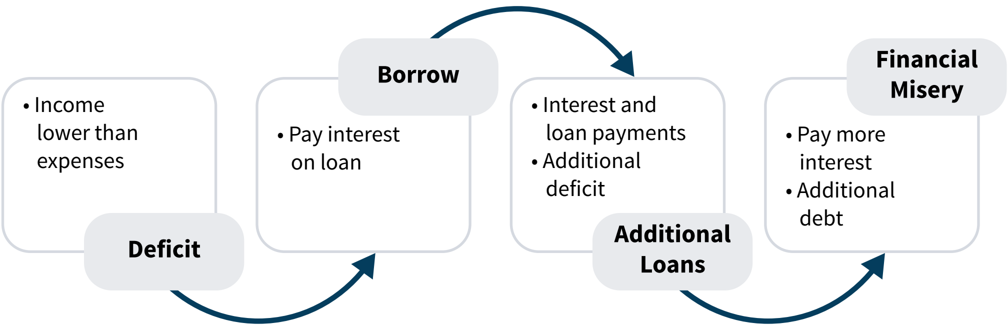


ILLUSTRATION 3.1.5

The Downward Spiral of Deficit Spending

Keep this in mind as you move forward on your lifetime financial journey: The combination of earning more income (which often comes with more training, education, and work experience), while keeping your expenses steady or falling, helps you build larger income surpluses (see **Helpful Hint**).

HELPFUL HINT

Simply increasing income does not build wealth if your expenses increase as well.

Saving Your Income Surplus

As Illustration 3.1.2 shows, you can accelerate wealth accumulation by saving your income surplus. In this section, we discuss how to make that happen through:

- Targeted savings ratios.
- Targeted savings rates.
- Savings strategies.

Targeted Savings Ratio

How much of your surplus should you be saving to be prepared for the future? One good method is to estimate your savings ratio on a regular basis. The **savings ratio** indicates the percentage of income that you are actively saving, as calculated by the following formula:

$$\textbf{Savings Ratio} = \frac{\textbf{Savings}}{\textbf{Income}}$$

HELPFUL HINT

If you have additional savings goals, such as a down payment on a house, emergency fund, or other goals, then your total savings ratio may be much higher than 12%.

- Savings includes contributions to a retirement plan, regular planned savings, and any surplus that you definitely will save.
- Income consists of wages, salaries, interest, dividends, child support, and other sources of regular income (before taxes have been paid).
- If you are younger than age 30, learn to save as much as possible. A minimum target savings ratio of 12% is typically recommended to help you reach future retirement needs. This means that you should be saving 12 cents of every dollar you earn for retirement (see **Helpful Hint**).

We will discuss savings in more detail later in the text.

Targeted Savings Rate

Target savings rates help to keep you progressing toward long-term goal achievement. A **targeted savings rate** is the savings ratio applied over a specific time period.

HELPFUL HINT

If you were born in 1960 or later, your normal retirement age is 67; however, retiring early at age 65 is a typical financial planning goal.

- If you are younger than age 30, your target should be to save 12% of income per year toward retirement.
- If you are between ages 30 and 40, your target savings rate should be at least 15% of income per year.
- If you wait to start saving for retirement until you are age 40, you will need a target retirement savings rate of 20% of income per year for each year until age 65 (see **Helpful Hint**).

If you want to be financially independent earlier than the general retirement age, then you will need to save even more of your annual income.

Savings Strategies

When you first start working, you may find it difficult to save money on a regular basis. One way to make it easier is to have your employer take money automatically from your paycheck and contribute it directly to a retirement savings plan or other savings account. This is called a **payroll deduction**. Millions of Americans use this powerful savings tool.

However, if a payroll deduction is not available, there is another strategy that you can use to automatically increase your savings rate over time (Richard Thaler championed this strategy and called it "Save More Tomorrow"). *Simply commit to putting half of every future raise toward creating an income surplus.* Here's how it works.

- Assume that your income will increase an average of 5% per year through raises.
- If you start by saving 3% of your income per year, after 4 years you will have an annual savings rate of 13%.
- Better yet, you will still increase your take-home pay each year.

This accelerating effect is shown in **Illustration 3.1.6**

ILLUSTRATION 3.1.6

Accelerating Effect of Saving Half of All Future Raises

	Start-of-Year Savings Rate	Employer Raise	Save Half of Raise	End-of-Year Savings Rate
Year 1	3.0%	5.0%	2.5%	5.5%
2	5.5	5.0	2.5	8.0
3	8.0	5.0	2.5	10.5
4	10.5	5.0	2.5	13.0
5	13.0	5.0	2.5	15.5
6	15.5	5.0	2.5	18.0

Consider that the average millionaire household (households that have accumulated more than $1 million in net worth) in the United States saves more than 20% of income annually. Millionaires often apply these savings toward wealth-building activities. Remember, many millionaire households have fairly typical annual incomes; it is just that they are saving a lot more than the typical household (see **Helpful Hint**).

HELPFUL HINT

Even if your goal isn't to acquire millions of dollars, by consistently spending less than you earn and putting your income surplus toward wealth building, you will be well on your way to achieving financial independence and success.

Escaping the Peril of Debt

As you begin your financial journey, you may find that you are carrying a lot of debt. Some of this debt might be unavoidable, such as the need to pay for education and transportation. However, too much debt can slow you down on your financial journey. When you have a lot of debt, you need to devote a large portion of your income to repay the debt and interest. This means that you have less income to save. In other words, too much debt can limit your saving options.

Total Debt-to-Income Ratio

The **total debt-to-income ratio** shows the percentage of your income that you are spending to pay down your debts. The ratio is calculated as follows.

Total Debt-to-Income Ratio = (Total Required Debt Payments ÷ Gross Income) × 100

Although the formula looks daunting, it is actually easy to use.

1. Add up all of your monthly debt payments. This includes minimum payments for credit cards, car loans, student loan debts, rent or mortgage payments (including the principal, interest, insurance, and property tax portions), and any other required debt payments you might have.
2. Figure out your gross monthly income. This is your income before any taxes or other expenses have been deducted from your paycheck.
3. Divide the total monthly payments by your gross monthly income and multiply the result by 100.

Your monthly debt payments should not exceed 36% of your gross income. If the ratio is higher, then you may lack the financial flexibility necessary to save and build financial wealth, as well as respond to unexpected events. However, as the next section discusses, sometimes you may need to take on debt in the short term to increase your future financial wealth later.

Concepts in Action

Tom is 29 and has the following income and expenses on a monthly basis. Estimate (a) Tom's income surplus or deficit, (b) his savings ratio, and (c) his total debt-to-income ratio.

Item Description	Amount
Income	$6,000
Retirement savings	500
Housing	1,000
Transportation	450
Food	600
Taxes	900
Credit card payments	350
Car payment	430
Entertainment	1,400
Surplus/Deficit	

Solution

a. Tom has an income surplus of $370 per month ($6,000 – $5,630).

b. Tom has $870 in savings for the month ($370 income surplus + $500 retirement savings) and $6,000 in income. Therefore, Tom's savings ratio is $870 ÷ $6,000 = 14.50%.

c. Tom has $1,780 in debt payments, which includes housing, credit card payments, and the car payment. So, Tom's total debt-to-income ratio is ($1,780 ÷ $6,000) × 100 = 29.67%.

Overall, Tom is doing well. He is saving more (14.5%) than the benchmark amount (12%) given his age. Additionally, the level of his debt payments (29.67%) is below the recommended benchmark (36%).

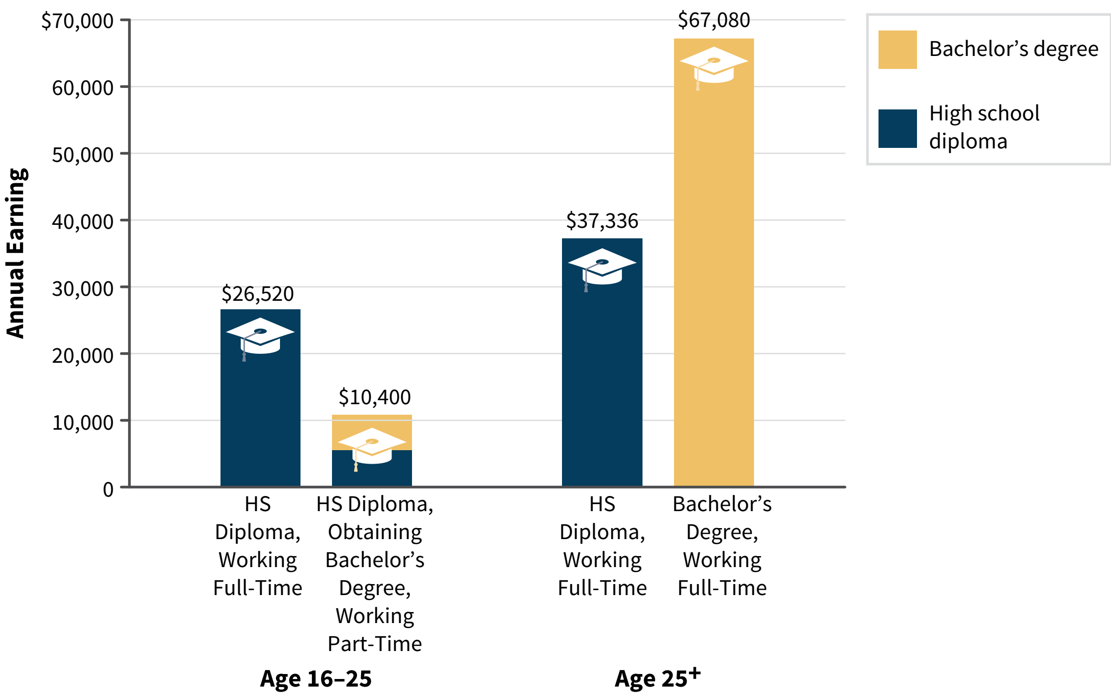
Investing in Yourself

As a student, you may be struggling to just keep your finances afloat while avoiding debt. This is a totally reasonable financial strategy.

- You should be focused on doing well in school and building your human capital.
- You may only be able to work part-time or work full-time at jobs that are flexible with your schedule. Working builds your human capital and provides income to help you avoid debt. Some employers also help pay for school.
- You might end up taking out student loans, which can be a valuable and necessary source of income during college. Keeping borrowing to a minimum will give you greater financial flexibility and peace of mind after you graduate.

As **Illustration 3.1.7** shows, it is almost always a good idea to continue with higher education and complete a degree. College graduates have median annual earnings that are $29,744 higher than those with only a high school diploma for the rest of their working lives (see

ILLUSTRATION 3.1.7 **Earnings Differences for High School versus College Graduates**



Source: "*Usual Weekly Earnings of Wage and Salary Workers Second Quarter 2017*" and "*Household Data Annual Averages: 38. Median Weekly Earnings of Part-Time Wage and Salary Workers by Selected Characteristics,*" Bureau of Labor Statistics, U.S. Department of Labor.

Helpful Hint). Because of the payoff, using some debt when necessary to help obtain a college education can be a smart financial decision. You can also gain a great deal of knowledge and skills very inexpensively through self-study, free courses, and industry-specific publications and certifications.

HELPFUL HINT

Although your income may be low today, more education now usually leads to a higher income later.

End-of-Topic Assessment

Multiple-Choice Questions

1. **Calculate** Burt makes $3,300 per month. He pays $800 in taxes, $700 in rent, $450 on food (which includes eating out), $225 for a car payment, $150 in gas and maintenance, and $700 in entertainment every month. What is Burt's surplus or deficit?
   - **a.** $0.
   - **b.** $25.
   - **c.** $275.
   - **d.** –$25.
2. **Calculate** If Zelda has a surplus of $3,000 per year and chooses to save that surplus for her future needs, how much wealth will her surplus savings be approximately worth after 25 years if she can earn a 9% rate of return?
   - **a.** $26,000.
   - **b.** $254,000.
   - **c.** $300,000.
   - **d.** There is not enough information to answer this question.
3. **Calculate** Shaquita, age 28, earns $4,750 per month. Every month she saves $525. Additionally, she has $3,000 in outstanding credit cards and makes a $250 monthly payment on these cards. What is Shaquita's approximate savings ratio?
   - **a.** 5.75%.
   - **b.** 7.25%.
   - **c.** 11.00%.
   - **d.** 16.25%.
4. **Calculate** Jose earns $7,000 per month. His monthly expenses include $1,000 in rent, $1,000 in recreational expenses, $500 in food, $400 in auto payments, $300 in gas and maintenance, $700 in student loan repayments, $300 in credit card payments, and $2,000 in miscellaneous expenses. Assuming Jose saves his monthly surplus, what is his approximate savings rate?
   - **a.** 5.25%.
   - **b.** 11.40%.
   - **c.** 20.30%.
   - **d.** 89.65%.
5. **Calculate** Heejung, age 29, earns $3,300 each month. He saves $325 into a 401(k) retirement plan on a pretax basis. Given this information, which of the following statements is *true*?
   - **a.** Heejung is saving more than the target savings rate for his age.
   - **b.** Given Heejung's age, he should be saving close to 20% of his income.
   - **c.** Heejung is saving less than the target savings rate given his age.
   - **d.** There is not enough information to answer this question.
6. **Calculate** Lisa (25 years old) studied music education in college and graduated a year ago. She currently works as a music teacher at a year-round private middle school. Her gross pay is $33,000 a year, or $2,750 a month. After taxes, health insurance, and other paycheck deductions, her net pay is $28,500 a year. Based on recommended guidelines, how much money should Lisa be saving each month?
   - **a.** $330.
   - **b.** $285.
   - **c.** $275.
   - **d.** $238.
7. If Evan's debt-to-income ratio is 32%, he is:
   - **a.** meeting the maximum ratio.
   - **b.** exceeding the maximum ratio.
   - **c.** beneath the maximum ratio.
   - **d.** There is not enough information to answer this question.
8. **Calculate** Richard earns $7,000 per month. His monthly expenses include $1,000 in rent, $1,000 in recreational expenses, $500 in food, $400 in auto payments, $300 in gas and maintenance, $700 in student loan repayments, $300 in credit card payments, and $2,000 in miscellaneous expenses. What is Richard's debt-to-income ratio?
   - **a.** 17%.
   - **b.** 20%.
   - **c.** 34%.
   - **d.** 39%.
9. All of the following are examples of acceptable uses of debt, *except* a loan to:
   - **a.** fund college expenses.
   - **b.** purchase a house.
   - **c.** fund a long vacation.
   - **d.** purchase a commuter car.

10. **Calculate** Angelica (23 years old) studied dance in college and graduated a year ago. She currently works as a dance instructor at a high school for the arts. Her gross pay is $40,000 a year, or $3,333 a month. After taxes, health insurance, and other paycheck deductions, her net pay is $32,800 a year. The transmission on her old car just broke, and it will cost several thousand dollars to repair. She decides that it is time to purchase a new car. She does not have sufficient savings to buy a car outright, so she is planning on getting a car loan to make the purchase. She has monthly student loan payments of $342 and monthly rent of $750. Jill would like to keep her total debt-to-income ratio equal to or below the recommended level. What is the maximum amount her monthly car loan payment can be so that her total debt-to-income ratio is equal to or below the recommended limit?

a. $0; Jill cannot currently afford a car loan.

b. $108 monthly car loan payment.

c. $425 monthly car loan payment.

d. $855 monthly car loan payment.

Adventures in Personal Finance

Short Answer

1. For individuals in the early years of their careers, what should their target savings rate be?

2. **Calculate** Bartolo is 24 and just started working full-time after graduation. He can save 3% of his pay for retirement savings. Bartolo expects to receive raises of 5% per year. If Bartolo wants to increase his savings ratio by using the "Save More Tomorrow" plan, how long will it take Bartolo to achieve a minimum 12% retirement savings ratio if he increases his savings by one-half of his raise each year?

3. **Calculate** Neil just graduated from college and has started his first job in sales. Based on conversations with his manager, Neil believes his income will increase substantially over the next couple of years. His current gross monthly income is $3,000. Although Neil's current car works fine, it does have a lot of miles on it. As a result, he would like to purchase a new car. Neil has some student loans, credit card debt, and a car loan. His monthly required payments are $182 for student loans, $125 for credit card debt, and $220 for his car loan. He has a roommate, and Neil currently pays $600 per month for his portion of the rent.

a. If Neil wants to keep his debt-to-income ratio less than 36%, what is the maximum monthly payment that Neil could have on a new car loan? Assume that Neil could sell his current car and pay off the remaining balance of his current car loan.

b. If Neil would like to take out a larger car loan and still keep his debt-to-income ratio below or equal to the recommended limit of 36%, what would you recommend that Neil do over the next few months to make this happen?

Explore

1. **Writing** Conduct an Internet search using the following phrase: "How much does the average American save each month?" Find at least three different answers to this question. In no more than 300 words, report your sources and the estimates provided by each source. Describe the average estimate of monthly savings. Were you surprised by the results of your search? Why or why not?

2. **Writing** Write a brief report on why it is important to track your total debt-to-income ratio over the course of your financial journey. Be sure to discuss how your total debt-to-income ratio can influence the types of loans you will be offered and the amount of interest you will pay.

Expanded Learning Activity

Writing **Calculate** Gather your income and expense data for the most recent monthly period. If you have been tracking income and expenses for a budget, use these amounts. Based on these data, calculate your income surplus or deficit, your savings ratio, and your total debt-to-income ratio. If you are still in school and have not yet started to make debt payments, calculate the total debt-to-income ratio based on what you expect to earn and spend after graduation. Write a brief report on how well you are doing based on the benchmarks discussed in this topic. Describe what steps you can take today and in the future to improve your financial ratios.

Employment Earnings

LO 3.2 Identify the different forms of employee earnings.

One of the most important things to do before you take a road trip is to fill up your car with gas. Having enough gas in the tank is one way to help guarantee that you make it to your final destination. In the world of personal finance, income is just like gas—fueling your lifetime financial journey. In this topic, we focus on one of the most important aspects of income: earnings from employment.

Overview of Earnings

Income versus Earnings

Income is a broad term used to describe all sources of money obtained by individuals and households. Income can include allowances, public assistance, interest, dividends, Social Security payments, and retirement payments (we will cover some of these forms of income in later topics). In fact, the U.S. Census Bureau collects data on more than 50 different sources of household income. **Earnings** are just one form of income. Earnings are compensation received for services performed for an employer.

Sources of Earnings

How much do you earn? If asked this, would you respond with something like, "Oh, I earn $9 per hour," or "My income is $43,000 per year," or "It's none of your business"? Now, could you identify if those earnings are in the form of a wage or salary? Actually, aren't a wage and a salary the same thing? The answer is "no." These two forms of earnings are quite different.

- A **wage** is what an employer will pay an employee to work. Almost always, wages are based on an hourly rate.
- A **salary** is payment for work for a set period of time, usually an annual amount.

Other forms of earnings include:

- A **commission**, which is a payment based on the sale of a product or service.
- A **bonus**, which is an extra payment usually based on performance or meeting certain production or sales requirements.

Illustration 3.2.1 shows examples of these four sources of earnings.

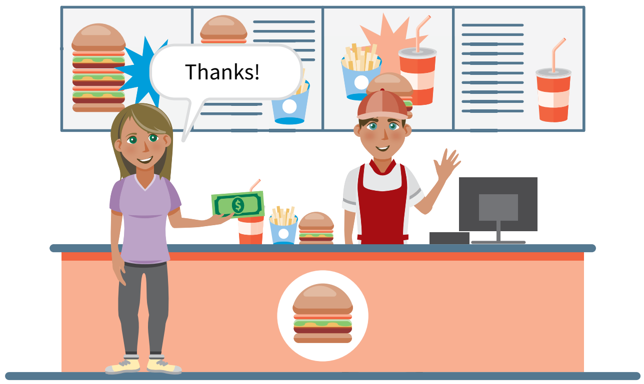
Wages

The most common wage is based on an hourly rate. The math is simple.

- You earn a set dollar amount, say, $8.00, for every hour worked.
- Federal rules define a regular work week as 40 hours, which is basically 8 hours per day for 5 days a week.
- If you earn $8.00 per hour, you will earn $320 per week before taxes and other payroll deductions.

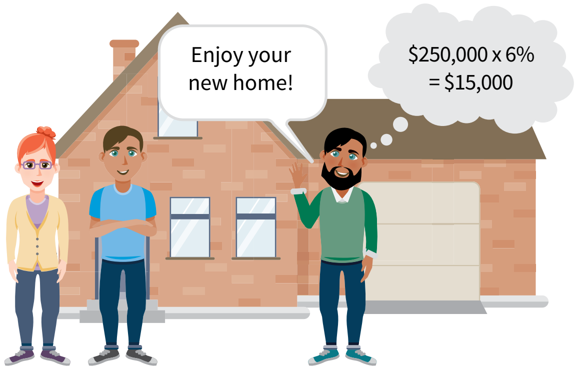
Some people also earn a wage based on the number of products produced per hour or tasks completed, but this is relatively rare. **Illustration 3.2.2** shows an example of an earnings statement for a pay period for someone who earns a wage.

ILLUSTRATION 3.2.1 **Four Sources of Personal Earnings**

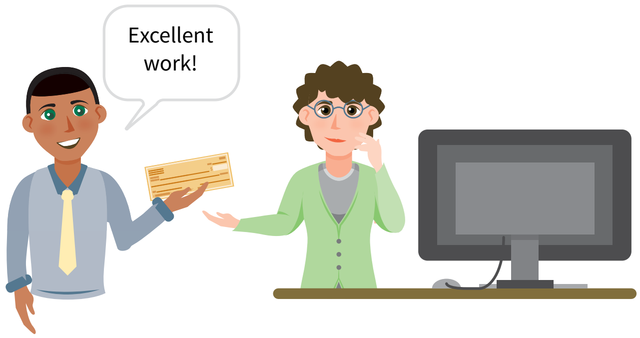


Wage: Per hour

Salary: Per year



Commission: Compensation based on the sale of products or services



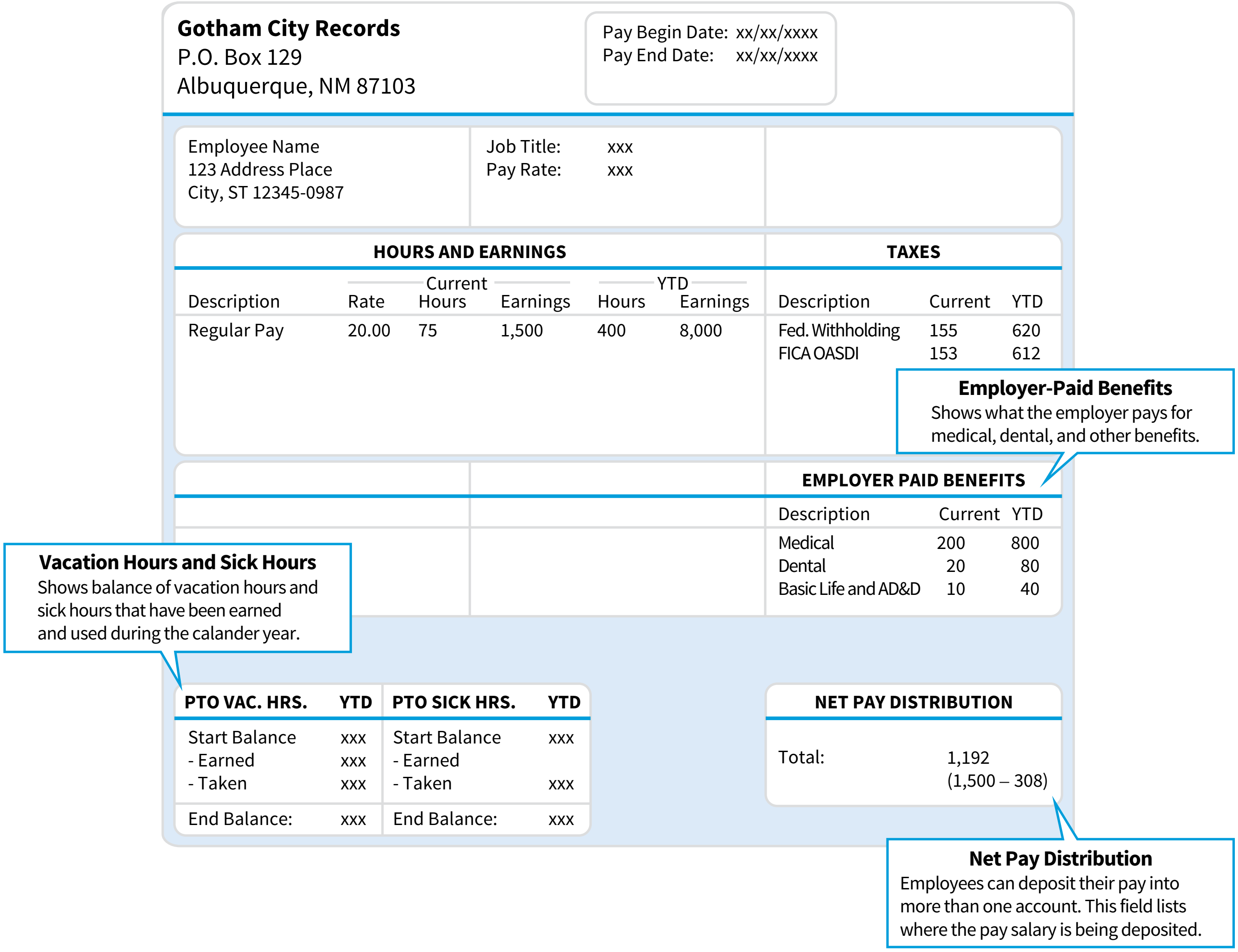
Bonus: Dollar amount for achieving or exceeding a company goal

> **HELPFUL HINT**
>
> **Before the Fair Labor Standards Act was enacted, employees had to negotiate their personal wage rate and the number of hours they would work per week, which some employers took advantage of. Thus, this law was put in place to protect those paid by the hour.**

Minimum Wage. The U.S. **minimum wage** is currently $7.25 per hour. This wage is periodically reset by Congress through the **Fair Labor Standards Act**, which was passed in 1938 (see **Helpful Hint**). However, many people earning a wage might receive more or less than the minimum wage, based on the following.

- Federal rules allow a minimum wage of $2.13 per hour for those who "customarily and regularly" receive more than $30 in tips per month. Restaurant servers are an example of those who fall under this rule. In this situation, the abundance and generosity of tipping customers determines pay. Tips plus wages typically exceed the standard minimum wage.
- Every state is entitled to enact minimum wage rules for employers within the state. For example, someone working for a fast-food restaurant (with 25 or fewer employees) in California must be paid $10.50 per hour compared to the national minimum wage of $7.25 per hour (in 2018). Some localities require an even higher minimum wage.
- Some states have a wage rate lower than $7.25 per hour. The reason is that not all jobs are subject to federal minimum wage rules. For example, very small businesses, hospitals, schools, public agencies, and some student-learner programs all are exempt from federal requirements. Special rules also apply to farmworkers and families that employ their own children. In fact, family members are not entitled to automatic overtime pay.
- Some cities have enacted minimum wage laws that exceed federal and state minimums. For example, New York City requires employers who have 11 or more employees to pay a minimum wage of $13 per hour (in 2018). Seattle has a minimum compensation of $15 per hour for employers with 500 or fewer employees (in 2019).

ILLUSTRATION 3.2.2 **Hourly Wage Pay Stub**



Gotham City Records
P.O. Box 129
Albuquerque, NM 87103

Pay Begin Date: xx/xx/xxxx
Pay End Date: xx/xx/xxxx

Employee Name
123 Address Place
City, ST 12345-0987

Job Title: xxx
Pay Rate: xxx

HOURS AND EARNINGS

		Current		YTD	
Description	Rate	Hours	Earnings	Hours	Earnings
Regular Pay	20.00	75	1,500	400	8,000

TAXES

Description	Current	YTD
Fed. Withholding	155	620
FICA OASDI	153	612

Employer-Paid Benefits
Shows what the employer pays for medical, dental, and other benefits.

EMPLOYER PAID BENEFITS

Description	Current	YTD
Medical	200	800
Dental	20	80
Basic Life and AD&D	10	40

Vacation Hours and Sick Hours
Shows balance of vacation hours and sick hours that have been earned and used during the calander year.

PTO VAC. HRS.	YTD	PTO SICK HRS.	YTD
Start Balance	xxx	Start Balance	xxx
- Earned	xxx	- Earned	
- Taken	xxx	- Taken	xxx
End Balance:	xxx	End Balance:	xxx

NET PAY DISTRIBUTION

Total: 1,192
(1,500 – 308)

Net Pay Distribution
Employees can deposit their pay into more than one account. This field lists where the pay salary is being deposited.

Source: Adapted from City of Albuquerque, New Mexico.

Overtime. Workers who fall under the Fair Labor Standards Act must be paid at least one-and-one-half times, or what is known as "time and a half," their regular wage when they work overtime.

- **Overtime** is defined as working more than 40 hours in one week.
- Although overtime pay can boost earnings, it is unwise to plan to earn overtime over a long period of time.
- Most employers try to limit overtime pay because it can quickly become costly for the business.

Concepts in Action

Jarvis needs your help in determining how much he can potentially make if he accepts a job and works 50 hours a week. Assume the job has the following conditions: (1) $10 base rate per hour and (2) "time and a half" for any work more than 40 hours per week.

Solution

Jarvis can earn $550 per week. He will receive $400 based on earning $10 per hour for his regular 40 hours ($10 × 40 hours), plus $150 for "time and a half" ($15 per hour) for every hour more than 40 that he works ($15 × 10 hours).

Salaries

Many employees prefer being paid a salary instead of an hourly wage. Recall that as opposed to a wage where you earn money by the hour, a salary extends over a set time period, most often a year. When you are offered a job with a salary, the amount offered will be set in annual dollar terms, such as $42,000 per year. Those who earn a salary generally do not receive overtime pay (there are exceptions for those who earn less than $40,000 per year) but are instead expected to complete their work assignments regardless of the time involved.

In general, there are two significant advantages associated with receiving a salary versus a wage.

1. Those on a salary typically earn more than hourly workers, at least before overtime pay is included.
2. Those on a salary tend to receive better employee benefits than those working for a wage. For example, an hourly worker may receive 2 weeks of paid vacation, whereas a salaried employee in the same firm might receive 3 or maybe 4 weeks of paid vacation each year.

Commissions

HELPFUL HINT

For some individuals, their only form of income comes from commissions; thus, they are exempt from minimum wage requirements.

It is also possible to generate income by earning a commission on the sale of a product or service. Most salespeople are paid, in part, by commission. For example, say a large department store hires you as a salesperson for the holiday season. The firm's policy may be to pay you a minimum wage plus 10% of all sales made (see **Helpful Hint**). If you work 8 hours and sell $1,000 of clothes:

- Your base wage would be $58 ($7.25 per hour × 8 hours).
- Your commission would be another $100 ($1,000 × 10%).
- Your total earnings would be $158, thereby increasing your wage to nearly $20 per hour ($158 ÷ 8).

Bonuses

Sometimes companies offer a bonus to employees as a way to improve productivity or to reward high-performers. This is the least common way Americans are paid.

- A firm might, for example, offer a bonus to any salesperson who sells more than a target level of product.
- Companies may even sometimes provide all employees a bonus if the firm exceeds certain profit targets.

HELPFUL HINT

You should consider any bonus as extra income. Building long-term financial plans in the hopes of receiving a bonus can be problematic because firms are generally not required to make bonus payments.

For example, assume Jamal works for a large corporation. The president of the company may decide that everyone in the firm will receive a bonus if the company exceeds a profit benchmark. The president's thought is that Jamal and other employees will work harder if they know that they will receive a bonus by exceeding expectations (see **Helpful Hint**).

Who Makes More Money?

Although it is possible, few workers receive earnings from each of the four forms just discussed. How you are ultimately paid will be based on the type of job for which you are hired. This, in turn, will be based on your background and qualifications. Here is what you should remember about wages, salaries, and commissions.

- The majority of those working in the United States are paid on an hourly basis. Income from tips and commissions is common, especially for those employed in service and sales jobs.

- Salaries are generally tied to specific occupations and professions. Those who graduate from college and work in a professional field are often paid a salary. Most salaried employees are required to keep track of their hours worked each pay period.
- Those who work on commissions tend to earn quite a bit more than others. Keep in mind that it takes a relatively high level of risk tolerance to rely on commission income. This explains why the turnover rate among salespeople is so high.

When you are just starting out on your lifetime financial journey, it is likely that you will be paid a wage. This is particularly true if you are in high school or college. Nearly every part-time job pays a wage, not a salary. As you gain additional education and experience, it is quite probable that you will be offered a salaried position (see **Helpful Hint**).

Illustration 3.2.3 compares the average income of those who earn wages, salaries, and commissions. Two striking takeaways emerge from a review of these data.

1. The difference in pay for those working in management positions, compared to those in nonmanagement jobs, is significant. This pay differential underscores the importance of human capital in driving your lifetime earnings. Typically, those in a management position earn more because these positions require more education and experience as well as the supervision of others.
2. Some of the highest paid workers today earn their living primarily by selling products and services. Put another way, they earn a commission. It is not unreasonable for a good salesperson to earn $50 or more per hour on average!

HELPFUL HINT

Remember, when you earn a salary you know exactly how much you will be paid, regardless of the time you spend on a project or activity, but this often means working more than 40 hours per week.

ILLUSTRATION 3.2.3

Average Pay for Different Occupations

	Annual Average Pay	Hourly Average Pay
Average American	$ 48,320	$23.00
Dry cleaner worker	22,660	10.89
Bus driver	32,980	15.86
Upholsterer	33,550	16.13
Dental technician	40,520	19.48
Mechanic	42,990	20.67
Flight attendant	46,750	22.48
Business manager	48,320	23.23
Credit counselor	49,310	23.71
Registered nurse	68,450	32.91
Food service manager	84,470	40.61
Information analyst	90,600	43.56
Sales manager	130,400	62.69

Source: U.S. Bureau of Labor Statistics (2016).

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following is considered to be compensation?
   - **a.** Hourly wages.
   - **b.** Salary.
   - **c.** Commissions.
   - **d.** Hourly wages, salary, and commissions.

2. **Calculate** Assume Maria earns $8.50 per hour. If she receives "time and a half" for any hours worked more than 40 per week, how much will Maria earn if she works 50 hours this week?

- **a.** $425.00.
- **b.** $450.00.
- **c.** $467.50.
- **d.** $637.50.

3. **Calculate** Let's say you make $22 per hour and work 40 hours per week. If you receive 2 weeks of unpaid vacation time per year, how much will you earn, before taxes, for the year?

- **a.** $44,000.
- **b.** $44,980.
- **c.** $45,760.
- **d.** $48,180.

4. Ana runs a small jewelry-making business from her home. She has no full-time employees, but she does pay her son (age 15) to help package and ship products. Over the holidays, Ana and her son put in many hours to meet rush orders. In fact, over the holiday break, her son logged about 60 hours of work. Typically, Ana pays her son $5 per hour. Which of the following is *true* in relation to this case?

- **a.** Because he worked extra hours, he can demand overtime pay based on the Fair Labor Standards Act.
- **b.** Because he worked extra hours, he can demand an increase in pay to the national minimum wage level.
- **c.** Because he is employed by his family, he is not entitled to extra pay or overtime pay.
- **d** Because he worked extra hours, he can demand both overtime pay and an increase in pay to the minimum wage level.

5. All of the following are exempt from federal minimum wage laws, *except*:

- **a.** hospitals.
- **b.** fast-food restaurants.
- **c.** schools.
- **d.** public agencies.

6. Who is more likely to be paid a wage?

- **a.** A high school graduate.
- **b.** A college graduate.
- **c.** A business owner.
- **d.** Both a high school graduate and a business owner.

7. In general, an employee being paid a salary is more likely to have _________ paid vacation and other benefits than an employee being paid an hourly wage.

- **a.** more
- **b.** less
- **c.** about the same
- **d.** impossible to determine

8. An administrative worker who does not generally receive overtime pay is likely paid a:

- **a.** salary.
- **b.** wage.
- **c.** commission.
- **d.** bonus.

9. Among all the different ways Americans are paid, which is the least common?

- **a.** Salary.
- **b.** Wage.
- **c.** Commission.
- **d.** Bonus.

10. **Calculate** Ernest works for a cookie company downtown. He earns $9 per hour. In a typical week, he works 20 hours. His employer provides overtime pay equal to two times his normal wage if he works past 40 hours. The company also provides a 10% commission on all cookies sold. How much can Ernest make this week if he works 30 hours and sells $1,000 worth of cookies?

- **a.** $270.
- **b.** $300.
- **c.** $340.
- **d.** $370.

Adventures in Personal Finance

Short Answer

1. **Calculate** Lori lives in Wichita, Kansas, and is a recent high school graduate. She knows she can get a job at a neighborhood coffee bar where she will earn the current minimum wage of $7.25 per hour. If she works 40 hours per week for 50 weeks a year (she will take a 2-week unpaid vacation), how much will she earn for the year?

2. **Calculate** Mitch earns $7.25 per hour. He works 40 hours per week for 50 weeks a year (he takes a 2-week unpaid vacation). Assume that Mitch pays the following monthly expenses: $500 in rent, $300 for groceries, $100 in taxes, $200 on entertainment (movies, dining out, etc.), $100 on clothes and shopping, and $90 in phone charges. How much does he have left for other expenses and savings? What advice do you have for Mitch regarding his job?

3. **Calculate** A new company has moved into town. The hiring manager has offered you one of the following three jobs. Which position pays the best?

- Job 1: This job pays $13 per hour with a regular 40-hour work week and time-and-one-half for overtime. The position is paid for 50 weeks, with 2 weeks of unpaid vacation.
- Job 2: This position is a salaried, entry-level management position that pays $29,000.
- Job 3: This opportunity is a commission-based sales position with the firm's marketing department. The company offers a base salary of $6,000 and a commission of 4% on all completed sales. The hiring manager believes that you will sell $600,000 worth of goods this year.

Explore

1. **Writing** **Presentation** Research the arguments for and against raising the national minimum wage to $15 per hour. Write the results of your analysis in a short review paper by summarizing the most compelling arguments for increasing the minimum wage, as well as reviewing the most relevant arguments against an increase. Be sure to share your findings with others in class.
2. **Writing** **Presentation** Investment banks are notorious for providing generous bonuses to salaried employees. Conduct a review of media sources to determine why these banks provide bonuses. Write a brief opinion paper describing the benefits and costs—both to the firm and society—associated with the bonus systems used by many large banks. Share your research results with others in class.

Expanded Learning Activity

Writing The **U.S. Department of Labor** tracks wages and salaries of thousands of occupations. Visit the Bureau of Labor Statistics website and find the most recent estimate of the average per hour wage for the following jobs. In addition, find the wage rate for the occupation you hope to obtain after graduation. Write a brief reaction paper summarizing your findings. Be sure to discuss the relationship between income and the required education for the positions.

- Lifeguard
- Accountant
- Judge
- Aerospace engineer
- Counselor
- Historian
- Preschool teacher
- Nurse
- Physician

Self-Employment Income

LO 3.3 Compare the financial pros and cons of self-employment and ways to structure a business.

Do you, like millions of others, dream of being your own boss? Many people start businesses and continue to work for themselves for the rest of their careers. Others grow their businesses from one person to many employees. Whether you start your own business and hire employees or simply work by yourself, you are considered to be self-employed. In this topic, we discuss what it means to be self-employed and the potential financial pros and cons of owning your own business.

Overview of Self-Employment

The ever-changing economy will always have space for motivated and thoughtful self-employed individuals. Some examples include **Uber** drivers, plumbers, accountants, and doctors. Note that plumbers can be employees of a larger company, or they can be their own boss and work for themselves. The same is true for accountants and doctors. Thus, being self-employed or working for someone else is often a choice for those working in almost any industry or profession.

Characteristics of Self-Employment

If you are **self-employed**, then you earn income from a business that you operate. As a result, being self-employed means that you:

- Set your own hours of work.
- Charge for your products or services.
- Pay your own taxes.

About 25% of self-employed individuals have one or more employees working for them. The term *small business* also applies to self-employed individuals, whether they have employees or not.

As shown in **Illustration 3.3.1**, approximately 10% of all workers in the United States are self-employed. This means that about 15 million people own their own businesses and derive much of their earned income from these business activities. However, it is worth noting that the majority of self-employed individuals are older than 45 years old.

Characteristics of Self-Employed Individuals

Self-employed individuals share some common personality traits (see **Helpful Hint**).

- Wanting to be their own boss; self-directed.
- Possessing a high level of motivation and individual responsibility.
- Placing a high emphasis on individual effort.

HELPFUL HINT

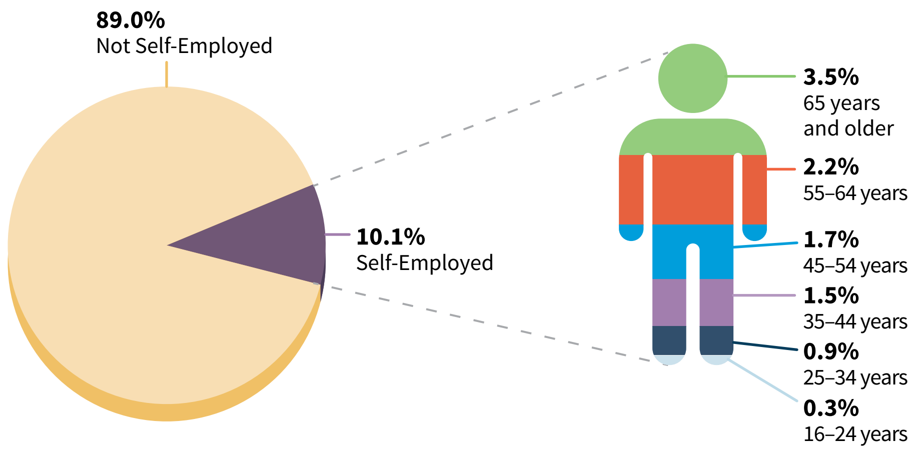
These general personality traits apply regardless of whether the self-employed person owns a landscape maintenance company or an investment firm.

Independent Contractors

Self-employed individuals can also work as independent contractors. **Independent contractors** enter into agreements with other businesses and individuals to perform specific tasks or functions. This may sound like being an employee, but it is different.

ILLUSTRATION 3.3.1

Percentage of Workers Who Are Self-Employed



Source: http://www.bls.gov/spotlight/2016/self-employment-in-the-united-states/home.htm.

- Independent contractors may be able to set their own hours, or they may have the same scheduling obligations that employees have. In either case, an independent contractor performs the work as a contract laborer or temporary worker and is not considered an employee.
- Independent contractors also provide their own tools and equipment to perform the work.
- Independent contractors are always responsible for paying their own taxes (see **Helpful Hint**). For example, as an independent contractor, you are subject to federal self-employment taxes and income taxes. You are also required to send quarterly income tax payments to the **Internal Revenue Service (IRS)**. You may also be required to pay local and state taxes and insurance payments.
- As with most self-employed individuals, independent contractors are completely responsible for saving for retirement.

HELPFUL HINT

You will know if you are an employee if your paycheck statement has FICA taxes—Social Security and Medicare—withheld. Otherwise, you are likely being treated as an independent contractor and the Internal Revenue Service (IRS) will consider you to be self-employed.

If you are in college or just starting your career, it is important to understand how you are being paid. Sometimes employers hire people as "employees" but pay them as independent contractors. These employers do this because it saves them money as they do not have to provide benefits to independent contractors. Further, recall that independent contractors are responsible for their own taxes, which saves these employers more money. Some employers are not effective in communicating this to their independent contractors (who think they are employees). This can result in a big surprise when the workers file their tax return.

The Pros and Cons of Self-Employment

The Advantages of Self-Employment

Although starting and managing a business often requires a lot of work, the benefits can be equally large.

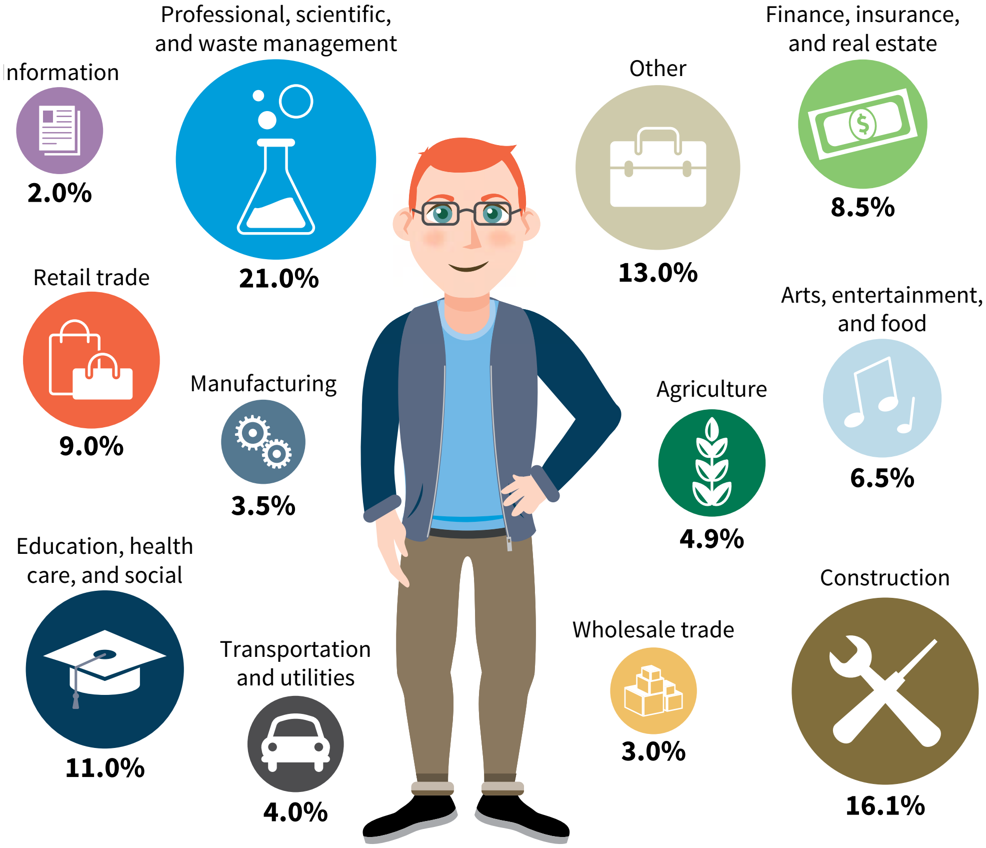
- Being self-employed allows you the freedom to be in charge of your own destiny, including setting your own work hours. However, many self-employed individuals work much more than 40 hours per week and some work irregular hours depending on client needs.
- Small business owners tend to do well financially. According to the last U.S. Census Bureau statistic, there are more than 23 million small businesses in the United States that collectively earn close to $1 trillion! This averages out to be more than $45,000 per year for each self-employed individual (see **Helpful Hint**).
- Some tax advantages associated with being self-employed include being able to deduct a variety of expenses from your annual income tax return.
- In many situations, small business owners also have the option to later sell their businesses, often quite profitably.

HELPFUL HINT

Remember this is the average; many small business owners don't do this well.

So, what is the best type of business to start if you are going to be self-employed? It really does not matter as long as you know how to generate sufficient income in your business to not only cover your required expenses but to earn a surplus. **Illustration 3.3.2** shows the diversity of industries and professions that include self-employed individuals. Note that these data are measured as the percentage of all self-employed individuals in any given industry (e.g., 16.1% of self-employed individuals work in construction).

ILLUSTRATION 3.3.2
Distribution of Self-Employed Individuals Across Industries



Source: "Self-Employment in the United States," Bureau of Labor Statistics (2016), https://www.bls.gov/spotlight/2016/self-employment-in-the-united-states/pdf/self-employment-in-the-united-states.pdf.

HELPFUL HINT

A recent study found that although self-employed individuals make up about 10% of the working population, they account for nearly two-thirds of the working millionaire population.

As noted previously, there is potential to make a lot of money from self-employment (see **Helpful Hint**). However, some self-employed individuals do not fare quite as well and are not able to support themselves on their self-employment income. Let's look at the potential pitfalls of self-employment next.

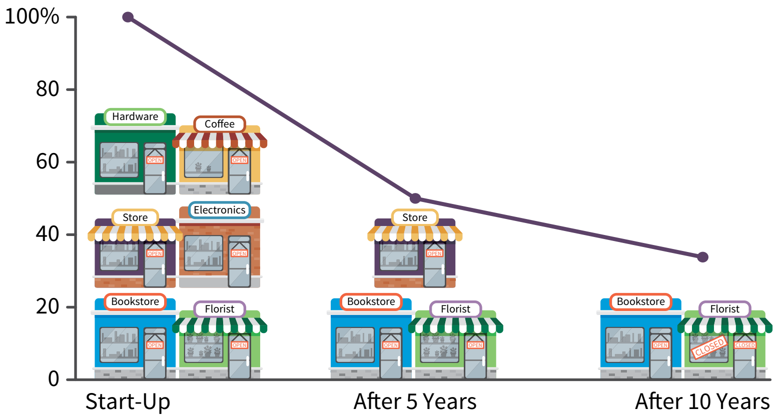
The Risks of Self-Employment

With so many of the wealthy households in the United States being self-employed, what could be the downside? Consider these statistics from the **Small Business Administration (SBA)**.

- Only about half (50%) of small business start-ups are still around after 5 years.
- Only one-third (33%) are still in business after 10 years.
- **Illustration 3.3.3** shows how the small business survival rate declines over time.

ILLUSTRATION 3.3.3

Percentage of Small Businesses Still in Operation



Source: "Frequently Asked Questions," Small Business Administration, https://www.sba.gov/sites/default/files/sbfaq.pdf.

Additionally, many self-employed individuals are not able to enjoy common employee benefits, such as paid vacation, sick days, and employer-provided health insurance.

Business Structures

If you are thinking about starting your own business, one of the most important questions that you have to answer first is, "What is the legal structure of my business?" How you structure your small business will affect nearly every aspect of your day-to-day operations, from determining how much money you can borrow to shaping how much in taxes you will end up paying. In this section, we discuss the legal forms of business organization that are available to you.

Sole Proprietorships

The default legal structure for a self-employed individual is a **sole proprietorship**. The advantages of a sole proprietorship are as follows.

- This form of business organization is easy to start up and requires no legal registration or paperwork.
- Because you are the owner, you are in charge of the decisions.
- All income and expenses from the business activity flow through to your personal tax return, including paying income tax and self-employment tax on the earnings. Losses from your business can lower your tax liability.

Legally, a sole proprietorship is not separate from the individual. As a result, there are also some associated disadvantages.

- You have **unlimited liability**, that is, you are totally responsible for paying any business debt and expenses. All of the liabilities that the business incurs (e.g., debts, lawsuits, and taxes) are yours.
- These liability amounts are not limited to the amount you invest in the company. This means that if your small business runs into financial difficulties and you are unable to pay its obligations, your personal assets can be seized by creditors to pay the debts and obligations of the business.

If the latter occurs, many small business owners file for bankruptcy to protect their remaining personal assets. **Bankruptcy** is a legal process through which an individual's assets or income are divided among creditors and any remaining unpaid debts are forgiven.

Partnerships

In contrast to a sole proprietorship, you may choose to form a partnership with one or more other individuals. There are many different types of partnerships, with the most basic being a general partnership. In a **general partnership**:

- Decision making is typically by majority.
- **Capital**—the money used to start or expand the business—can be raised through the collective assets of the partners and through the borrowing capacity of the partners.
- Taxation for each partner's share of income is included on each partner's respective tax return. The partnership does not pay taxes on business profits. Instead, taxable income flows through to the owners.

HELPFUL HINT

The term *limited* in the name refers to certain restricted, rather than unlimited, liability protection that each partner receives.

A major drawback of a general partnership is that each partner has unlimited liability for the entire partnership. This means that each partner is totally responsible for the mistakes of other partners. As a result, other partnership structures have been developed (see **Helpful Hint**).

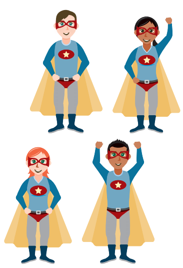
- **Limited partnerships** are partnerships in which there is a general partner who manages the business and one or more limited partners that just invest money into the partnership and are not involved in the day-to-day management. A limited partner's liability is capped at his or her investment in the partnership.
- **Limited liability partnerships** are designed for professionals working in a partnership. Partners will not be held liable for the negligent actions (and resulting liabilities) of other partners, but they will still be liable for the general obligations of the business. Many doctors, attorneys, and accountants use this type of partnership.

Limited Liability Companies

One of the most popular business structures is a limited liability company. A **limited liability company (LLC)** shields the personal assets of the owner(s) from the liabilities of the business even though all losses (and earnings) from an LLC flow directly to the owner(s).

- If the business is not able to pay its debts, creditors can claim the assets of the business, but they cannot claim the nonbusiness assets of the owner.
- LLCs are similar to partnerships in structure but limit liability much better than general partnerships.
- Although there are higher legal costs associated with setting up an LLC as opposed to a general partnership, the added liability protection generally outweighs the additional costs.

Corporations



Another way to avoid being personally responsible for the liabilities of your business is to form a corporation. A **corporation** is a legal structure that is separate from the owner(s) of the business. Corporations are very effective at limiting liability, but they are also expensive to form and maintain. Because of this, few self-employed individuals and small businesses are structured as corporations.

If you are self-employed, how you choose to structure your business can have a big impact on your ability to make decisions about the business, including issues related to:

- Raising and borrowing money.
- Limiting your liability.
- Paying taxes.

These issues, in turn, can affect how much income you will be able to earn from your business. It is, therefore, important to talk with an attorney when making business structure decisions.

Concepts in Action

Latisha is known in her neighborhood as a crafting authority. She is best known for making knitted baby rattles in the shape of animals. Inside each intricate creation are several bells and other noisemakers. Based on the popularity of her craft work, Latisha is thinking about quitting her job and starting her own business. Based on the topic discussion, help Latisha answer the following questions.

1. Does Latisha have any obvious liabilities associated with her baby rattles? If yes, what are some of these liabilities?
2. What form of business structure will provide Latisha with appropriate liability protection today and in the future?
3. If she decides to create a sole proprietorship, how will the company's profits be taxed?

Solution

1. There are several potential types of liability. For example, Latisha could be held accountable if a baby swallows one of the bells or other noisemakers and needs medical attention. Additionally, someone might claim that she stole the idea for the product and sue her for damages.
2. If she establishes the business as a sole proprietorship, Latisha will be held personally responsible for any business liabilities. She would be better served using an LLC or corporate business structure.
3. Under a sole proprietorship, all business earnings (and losses) pass directly to Latisha (the business owner) as personal income. She will be responsible for paying income tax and self-employment tax on the earnings.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following individuals would be most likely classified as self-employed?

I. A teller at a bank.
II. A lawyer in a partnership.
III. An independent plumber.
IV. A worker paid by the hour; weekly paycheck does not withhold any taxes.

a. II and III only.
b. III and IV only.
c. I, II, III, and IV.
d. II, III, and IV only.

2. Jane just got her first paycheck. How does she know if she is considered to be an employee of a firm?

a. She considers herself an independent contractor.
b. The business that pays her is a corporation.
c. Her paycheck withholds FICA taxes.
d. She files a simple tax return.

3. In general, in which of the following sectors of the economy do more self-employed individuals work?

a. Food services.
b. Professional services.
c. Retail.
d. Agriculture.

4. The easiest type of business to start is a:

a. corporation.
b. limited liability company.
c. sole proprietorship.
d. partnership.

5. Rodriguez would like to start his own business making jewelry. If he opens his business as a sole proprietor, in which of the following events would he be personally liable?

a. If a customer lost a ring that he made.
b. If a customer sued him for using lead in a child's ring.
c. If his jewelry company failed to pay a debt.
d. Both if a customer sued him for using lead in a child's ring and if his jewelry company failed to pay a debt.

6. Yolinda and Wes decide to go into business together. They are excited to get started immediately. Which of the following forms of business can they use when establishing their company?

a. Corporation.
b. Sole proprietorship.
c. Partnership.
d. Both sole proprietorship and partnership.

7. Yolinda and Wes decide to go into business together as a partnership. As part of their business, they lease a car, with each paying half the monthly expenses. Unfortunately, the business does not make any money. After 2 years, Yolinda decides to leave and take a job with another employer. Wes, on the other hand, decides to make a go of the business. Given this information, which of the following is *true*?

 a. Because Yolinda is no longer involved in the business, she no longer is legally obligated to help pay the car expenses.

 b. If Yolinda stops making her share of the car expenses, Wes will be liable for Yolinda's share.

 c. Because the partnership is no longer in existence, the car lease is null and void.

 d. Because Wes received only half of the company's profits, he is only liable for his share of expenses.

8. Yolinda and Wes decide to go into business together. What form of partnership arrangement can they use to limit their individual and joint liability?

 a. Limited liability partnership.

 b. Limited liability company.

 c. Limited sole proprietorship.

 d. Either a limited liability partnership or a limited liability company.

9. Which of the following legal structures passes business income directly to the firm's owner(s)?

 a. Sole proprietorship.

 b. Limited liability company.

 c. Corporation.

 d. Both sole proprietorship and limited liability company.

10. Which of the following are potential liabilities associated with business ownership?

 I. Taxes.

 II. Debts.

 III. Lawsuits.

 a. II only.

 b. I and II only.

 c. II and III only.

 d. I, II, and III.

Adventures in Personal Finance

Short Answer

1. Describe some of the factors the **IRS** looks for when determining if someone is self-employed or an employee.

2. Why do some employers prefer to hire people as independent contractors?

3. Explain the pros and cons of starting your own business and why you think so many people choose to pursue self-employment.

Explore

1. Search for a self-employment aptitude test on the Internet by searching "self-employment aptitude test" or by another similar phrase. Locate and take three different aptitude tests. What did the results tell you? Were you surprised by the results? Based on your own understanding of your personality, do you think the results are accurate?

2. **Writing** The **Small Business Administration** website has helpful information on the advantages and disadvantages associated with the different types of business structures. Visit the site to learn more about the different types of business structures that can be used to establish a business. Summarize what you learn into a list of at least three benefits and three drawbacks about corporations, partnerships, limited liability companies, and one additional form of business ownership.

3. **Writing** Visit the **IRS** website and search "independent contractor or employee" to learn more about what this means in terms of your taxes. Based on what you have read, write a one- to two-page summary discussing the tax issues that self-employed individuals should be aware of when planning their finances.

Expanded Learning Activity

Writing An excellent starting place for individuals considering self-employment is the **Small Business Administration (SBA)**. The SBA provides many resources for small business owners ranging from "how-to" guides for starting a business, one-on-one counseling and training for small business owners, loan guarantee programs, and facilitating other financing for small businesses. Go to the SBA website and research the basic steps involved in starting a business. Write a brief report highlighting the important steps associated with launching a new company.

Investment Income

LO 3.4 Discuss the sources and characteristics of unearned income.

What is the first thing that comes to mind when you think of the word *income*? If you are like most people, terms and phrases like *working* and *getting paid* probably come to mind. When you are just beginning your lifetime financial journey, income certainly does mean working and getting paid. In fact, you need sources of income—from wages, tips, salaries, commissions, and bonuses—to pay your daily living expenses and to save for the future. These income sources are called *earned income* because you need to work or perform an activity to receive payment. Your human capital is used to produce earned income.

There are also other types of income that can help fuel your financial journey: *unearned income*, which is money you receive from financial capital like investments. The great thing about unearned income is that you don't have to work for it. Instead, your money works for you.

Sources of unearned income are important when you retire. If you no longer are earning money, how will you live and pay for things? The answer to this question is a theme imbedded in this text: converting your human capital into financial assets.

- As you work, you are going to be earning income and saving money. Saving part of your earnings is an essential step in converting human capital into financial capital.
- Then, you are going to apply the principal of risk and reward and invest your savings to build a nest egg for the future. Your investments will be generating sources of unearned income, most typically interest and dividends.
- When you retire, you can then use your sources of unearned income to live on.
- Some people apply this strategy earlier in life and use unearned income as a means to pay for all sorts of things today.

Earned Income versus Unearned Income

Earned Income

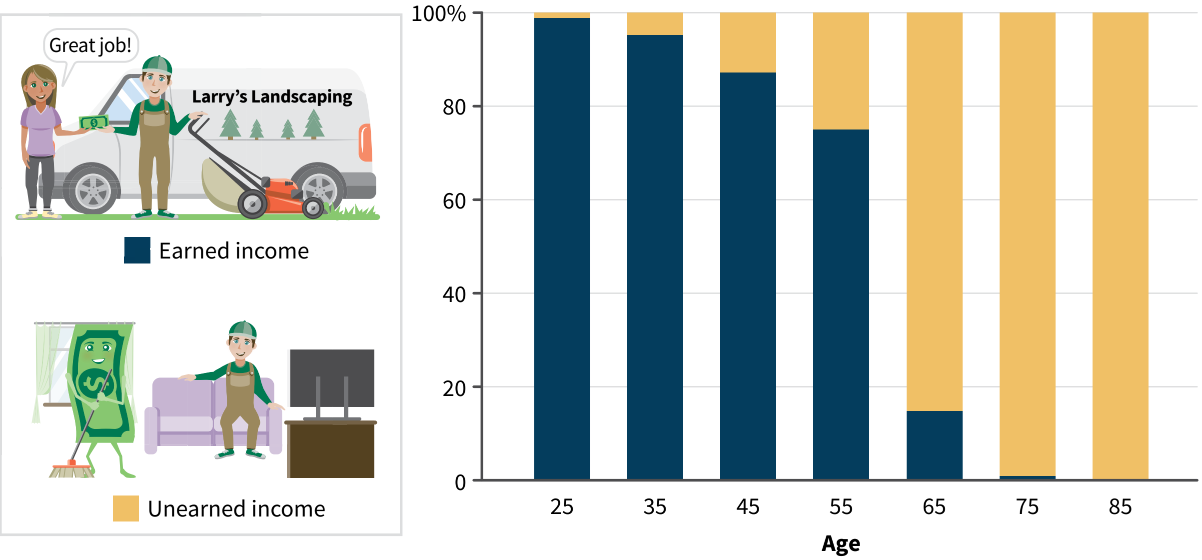
As the name implies, **earned income** is money that you receive from work (payment for effort) whether in the form of salaries, wages, commissions, bonuses, or self-employment. That is, sources of earned income come primarily through the labor market. As someone just starting out on your financial journey, earned income is going to be a big part of your financial life. In fact, your earned income will likely be your primary source of money to fund your spending and savings plan. However, as we discuss next, your *total income* includes more than just earned income.

Unearned Income

Illustration 3.4.1 shows that your **total income** is the combination of earned and unearned income. If earned income is what you make from your job or through self-employment, what is unearned income? **Unearned income** is money received from sources other than wages, salaries, commissions, bonuses, or self-employment. It is typically derived from investments.

- As shown in Illustration 3.4.1, during your working life, the bulk of your total income comes from earned income.
- Over time, however, the size of the contribution of earned and unearned income in shaping your total income changes.
- When you stop working and retire, your total income will consist primarily of unearned income sources.

ILLUSTRATION 3.4.1 **Total Income over Lifetime**



Let's look at the elements of Illustration 3.4.1 in more detail. Remember that earned income is generated when you convert your effort and energy into paid work. Sources of earned income include wages, tips, salaries, commissions, bonuses, and self-employment. Sources of unearned income, according to the **Social Security Administration**, include but are not limited to:

- Interest from savings accounts.
- Dividends.
- Capital gains.
- Monetary gifts you receive.
- Government benefits.
- Unemployment insurance.
- Social Security benefits (see **Helpful Hint**).
- Lottery winnings.
- Money received by inheritance.
- Proceeds from savings bonds.
- Child support.
- Alimony.

HELPFUL HINT

Social Security is a government-sponsored retirement and disability system that provides income for people who are retired and sometimes for individuals who are permanently disabled.

Regardless of when or how you use it, unearned income is another tool to help you reach your lifetime financial goals and dreams. In this topic, we focus on two forms of unearned income: interest and dividends.

Interest and Dividends

As opposed to many of the unearned income sources listed above, which are often one-time occurrences or related to an unfortunate event, you can plan and control earnings from interest and dividends with greater certainty. Interest and dividends are particularly good tools for putting your money to work.

Interest as Income

Think back to when you were a child. You probably had a piggy bank. You put coins in the bank in hopes of saving enough to buy something in the future. Your piggy bank helped you

learn the importance of saving, but in the end, you only got out of the piggy bank what you put in.

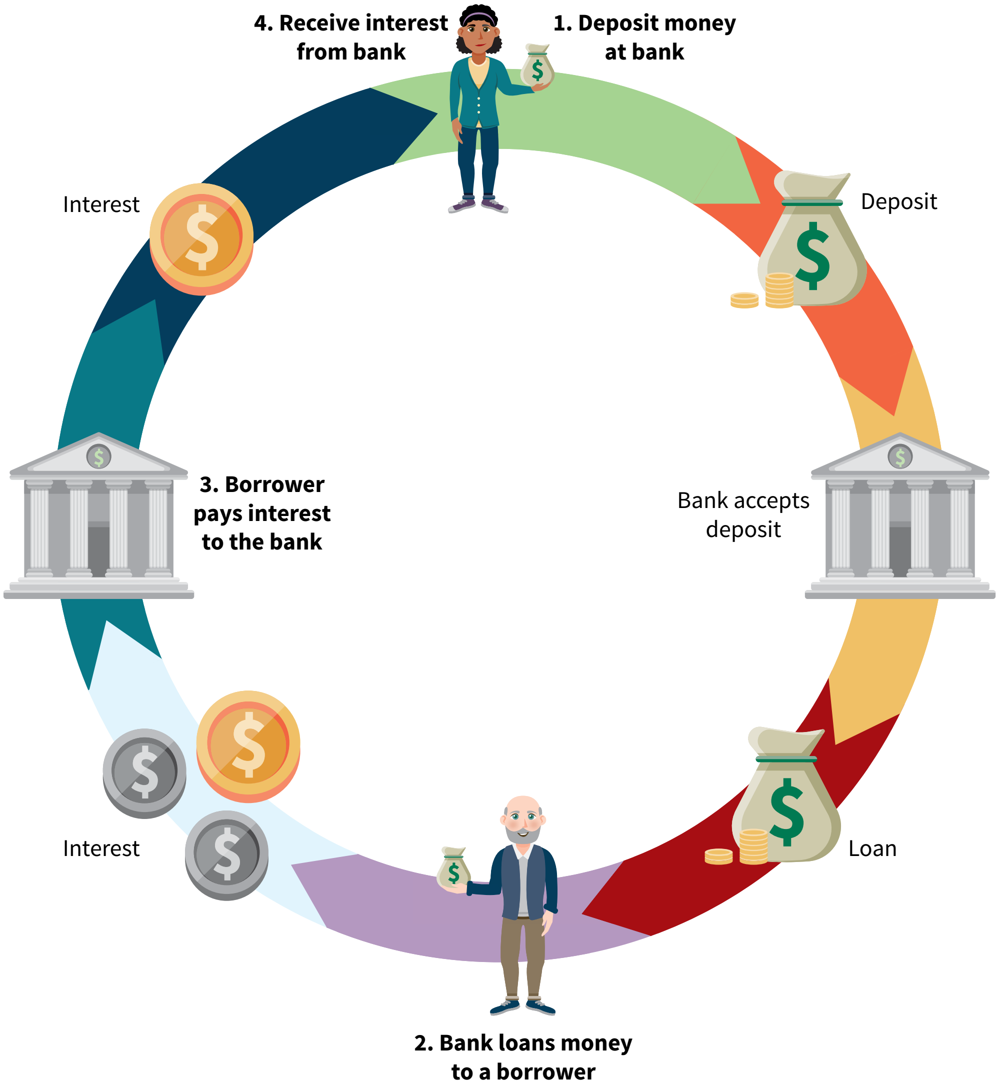
Now think of a bank or credit union as a piggy bank, except that your piggy bank in this case pays you every time you drop a coin into the bank. As **Illustration 3.4.2** shows, when you put money into your account, so does a banker. Here's how the process of earning **income** at a bank or credit union (a credit union is an organization that is owned by account owners) works.

1. You deposit money at the bank in an account.
2. The bank uses this money (your money is FDIC-insured up to $250,000 by the federal government) and lends it to others.
3. The bank then makes money by charging interest on what it lends out (this is the money the bank borrowed from you) (see **Helpful Hint**).
4. The bank pays you interest in return for borrowing your money. Interest is a payment that you receive for allowing the bank to use your money.

HELPFUL HINT

Banks and credit unions earn money based on the difference between what they pay you and what they charge others to borrow money.

ILLUSTRATION 3.4.2
Earning Interest on Savings



When your money and interest begin to compound over time, your savings account balance can grow quickly, which will enhance your wealth situation. We will discuss earning interest (for example, through savings accounts) in more detail in a later chapter.

Dividends as Income

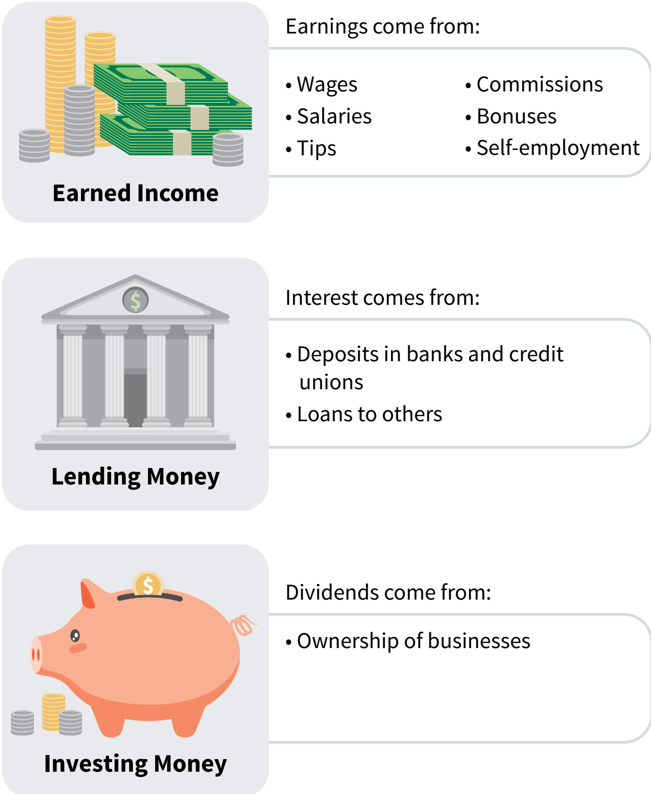
During your lifetime financial journey, you can make money in these three ways.

1. Through employment (your job).
2. As a lender.
3. As an investor.

As show in **Illustration 3.4.3**, you generate earned income from your job. Lenders—you are a lender when you deposit money in a bank or credit union account—produce unearned income in the form of interest. Investors receive unearned income as dividends (as well as capital gains, which we will discuss in another topic).

ILLUSTRATION 3.4.3

Three Ways to Make Money



HELPFUL HINT

As opposed to lenders, who know the amount of interest beforehand, investors only make calculated guesses regarding how much they might make in the future from their partial ownership of a company.

Investors are people who put their money at risk through the partial ownership of businesses.

- If the company is profitable, investors get to share in the profits of the firm (see **Helpful Hint**).
- An investor's share of the profits is known as a **dividend**.

If you want to become an investor, you will need to open a brokerage account or purchase shares in a mutual fund or similar product (we will discuss these investment tools later in the text). Once you have an account, you can begin investing. **Illustration 3.4.4** summarizes the process an investor takes to generate unearned income.

Keep this in mind: It's possible for an investor to buy into a company and receive nothing in return. This risk is why investors tend to demand a higher rate of return than savers and lenders.

- If you lend money by making a deposit into an insured bank or credit union account, you will not earn much interest because you are completely protected in case of a loss.
- When you make an investment, that protection does not exist. Further, if a company loses money, you may lose your original investment.

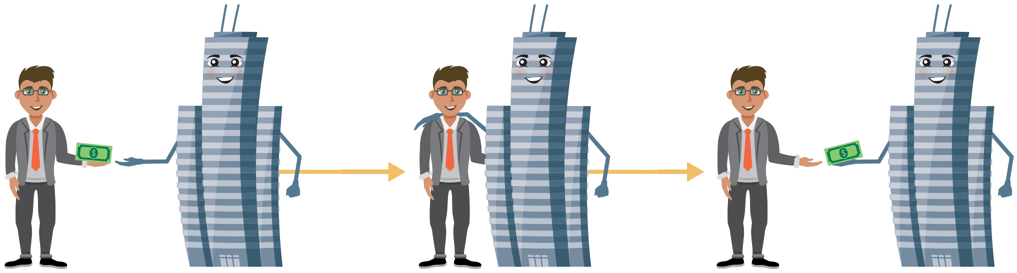


ILLUSTRATION 3.4.4

Process of Investing Leads to Dividends as Unearned Income

Objective and Subjective Risk

This is a good time to introduce the concepts of objective and subjective risk.

- **Objective risk** is something that can be measured using probabilities.
- **Subjective risk** refers to personally developed probabilities of potential losses based on expectations, fear, worry, and other factors. Subjective risk varies from one person to another.

For example, although the objective risk associated with holding money in a bank account is low, the subjective risk might be perceived quite differently. A person might believe, for instance, that the rate of interest he or she will earn will not be enough to keep pace with the cost of living.

When it comes to investing, risks can be quite high. Companies can quickly succeed or fail, and the economic environment can fluctuate dramatically. This makes it hard to know with precision whether one investment is better than another. This is where subjective risk comes into play. The decision to invest is driven in large part by an investor's subjective perceptions of the risks offered by an investment. If you want to earn more in interest and dividends, you will need to take more risk. Your willingness to take on this extra risk will likely be shaped by your subjective evaluation of the risk involved. We will discuss the role of risk, interest, and dividends in more detail in a later chapter.

Concepts in Action

Alex has managed to save $10,000 over the past few years. After visiting several banks and doing online research, Alex has narrowed his options to two choices: (1) a savings account that will pay $600 total for the use of the money for 3 years (guaranteed), or (2) an investment that pays a 2% dividend. What is truly remarkable is that the dividend has been increasing by 10% each year. For example, if Alex were to invest today, he would receive $200 in dividends. The next year, he would receive $220 in dividends. Here is how much Alex estimates he might receive in dividends over the next few years if he invests today:

Year 1: $200
Year 2: $220
Year 3: $242
Year 4: $266
Year 5: $293
Year 6: $322
Year 7: $354
Year 8: $390
Year 9: $429
Year 10: $472

Assume that Alex has a long time horizon and is willing to accept some ups and downs in the value of his savings and investments over time. Given the information provided here, what option should Alex choose if his primary goal is to accumulate wealth?

Solution

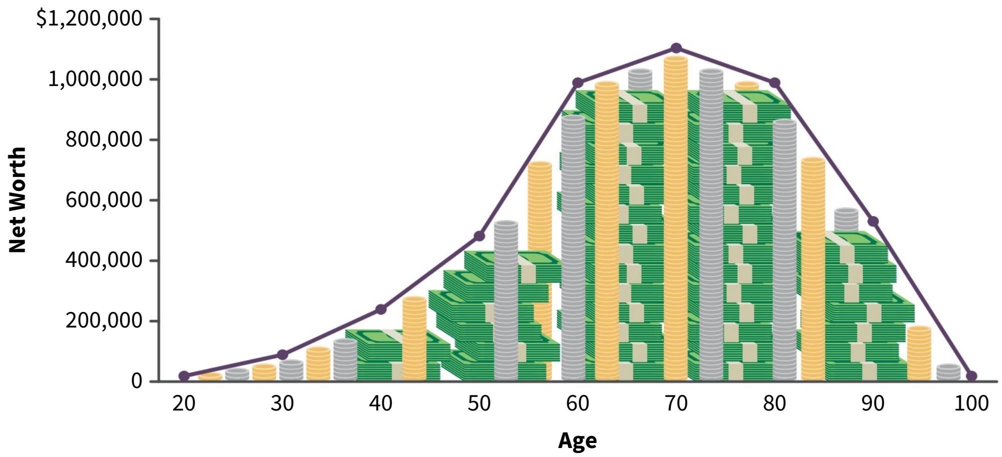
Alex should choose the investment. Even though the savings account will generate a 6% return ($600 ÷ $10,000) over 3 years, the investment will generate a higher long-term return. During the first 3 years, Alex will receive $662 in dividends. The fact that the dividend will grow by 10% each year means that the level of his unearned income will quickly be larger than the fixed 6% rate of earnings he can achieve through the savings account. Keep in mind, though, that Alex is taking more risk buying the investment. If the company were to lose money or if something else happened, the dividend could be cut.

Wealth over the Life Span

If you manage your earned and unearned income effectively, your financial life might look like the one shown in **Illustration 3.4.5**. This mountain-shaped curve shows how you might expect to see your wealth rise and then diminish over time.

ILLUSTRATION 3.4.5

Wealth over the Life Span



Economic Life Span

Illustration 3.4.5 represents what economists call the **economic life span**.

- When you are young, you have lots of time, energy, and skills; the present value of your future earnings (human capital) is high. However, your net worth situation has been, or may actually be, negative.
- As you save and invest as you grow older, you should find that your wealth begins to increase. At first, the growth will be slow because you will be paying off debts, buying new things, and possibly raising a family.
- Sometime near age 50 and extending through age 70, many of your expenses will begin to flatten out. This means that you can start to redirect more of your earned income into savings. It is at this point that you will experience the greatest increase in wealth. This is the point when you will be able to combine your earned income with sources of unearned income (interest, dividends, and capital gains) to maximize your wealth. Also during this time, although your earnings will likely be near their highest for your career, you will have fewer work years remaining. Thus, the present value of fewer work years is decreasing.

When you look at this picture as a financial roadmap, you can see that your ultimate goal is to accumulate enough wealth and sources of unearned income during your younger years to retire in comfort during later life (see **Helpful Hint**).

HELPFUL HINT

How much you need to ultimately accumulate will be based on your dreams, desires, and goals. Remember that no two lifetime financial paths are the same.

Rule of 72 Revisited

Making your money work for you over your lifetime financial journey involves finding opportunities to increase unearned income. Think back to the **Rule of 72**.

- The Rule of 72 tells you how long it will take to double your money.
- Just take 72 and divide it by the interest rate you hope to earn. For example, if you put your money in a bank account earning 1% interest, it is going to take almost 72 years for the money to double.
- You must earn a higher return to create wealth.

Don't worry about this right now though. Future chapters will discuss ways to generate unearned income in such a way that your net worth increases over time.

End-of-Topic Assessment

Multiple-Choice Questions

1. All of the following are examples of earned income, *except*:

a. wages from a job.
b. interest received from a savings account.
c. a year-end bonus received from an employer.
d. commissions earned on the sale of products or services.

2. Aman has the following sources of income: $4,000 from his job, $1,000 in unemployment insurance, $2,000 from the sale of his motorcycle, and $500 in interest from an investment. Which of these sources is *not* considered unearned income?

a. The $4,000 from his job.
b. The $1,000 in unemployment insurance.
c. The $500 in interest.
d. Both $4,000 from his job and $1,000 in unemployment insurance.

3. **Calculate** Aman has the following sources of income: $4,000 from his job, $1,000 in unemployment insurance, $2,000 from the sale of his motorcycle, and $500 in interest from an investment. What is his total income?

a. $5,500.
b. $6,000.
c. $7,000.
d. $7,500.

4. When you deposit money into an FDIC-insured bank account, you are considered a(n):

a. borrower.
b. lender.
c. debtor.
d. investor.

5. Nick has been saving money using a bank account. Each month, he deposits $400 into the account. Over the years, he has saved $125,000—an impressive achievement! Unfortunately, Nick just learned that his bank went out of business. How much of his account balance can Nick expect to receive back?

a. He can expect $0 because the account balance was in excess of $100,000.
b. He can expect approximately 50% of the balance because this is the amount of reserve the bank was required to hold.
c. He can expect $125,000 because his balance was less than the maximum insured amount.
d. He can expect $250,000 because Nick is guaranteed to receive his balance through the federal government plus an additional amount up to the insured limit.

6. Someone who takes risks with his or her money by buying assets or shares in a company in hopes of receiving unearned income in the form of dividends is called a(n):

a. borrower.
b. investor.
c. lender.
d. banker.

7. How does an investor usually receive income?

a. In the form of a wage or salary.
b. In the form of interest.
c. In the form of dividends.
d. Both in the form of a wage or salary and in the form of dividends.

8. Emily invested $100,000 into a start-up company this year. For the first time, she received a payment from the company for $3,000. The $3,000 is called a(n):

a. dividend.
b. yield.
c. interest.
d. earned income.

9. **Calculate** Emily invested $100,000 into a start-up company this year. For the first time, she received a payment from the company for $3,000. What was Emily's rate of return on her investment?

   a. 1%.

   b. 3%.

   c. 13%.

   d. There is not enough information to answer this question.

10. Toward the end of your career, your human capital tends to _________ because of fewer remaining work years, whereas your assets tend to _________ because of effective retirement preparation.

    a. decrease; decrease

    b. increase; increase

    c. increase; decrease

    d. decrease; increase

Adventures in Personal Finance

Short Answer

1. This topic classifies income into two groups: earned and unearned. Using these terms, classify each of the following sources of income:

   a. Wages.

   b. Interest.

   c. Dividends.

   d. Salaries.

   e. Gifts.

2. **Calculate** Calculate the approximate number of years Finn would need to wait to double his money if he could earn 1%, 4%, and 8% interest on his savings.

3. **Calculate** Calculate the approximate rate of return for Juliana, who lends $2,000 and receives $50 in interest during the year.

Explore

1. **Presentation** Compare the amount of interest you can earn on a traditional savings account at a number of local banks and credit unions with the interest rates that some online banks are willing to pay. Discuss the results of your research with others in class. Be sure to talk about why online banks may be able to pay a higher level of interest.

2. **Writing** Over time, investors who use a diversified approach—they invest their money in many different assets—tend to generate more unearned income that others who keep their money in very safe accounts that generate limited amounts of interest. To invest in assets that pay dividends, you generally need a brokerage account. Investigate at least three online brokerage account platforms to determine the minimum investment needed to open a brokerage account. Examples of online brokerage firms include **Charles Schwab**, **E-trade**, **Fidelity**, **TD Ameritrade**, and **Vanguard**. Write a brief (250 words or less) summary of your findings. Be sure to discuss how brokerage account minimums limit who can gain access to these companies' investments.

3. **Writing** It is possible to receive interest and dividends using what are known as *passive investment strategies*. Index mutual funds represent a passive investment. Research the long-run advantages of passive investing over active investing, such as buying individual stocks in a brokerage account. Write a brief summary of your findings. As an element of your report, be sure to indicate if you prefer passive versus active investing.

Expanded Learning Activity

Writing Visit an online financial information site, like **Yahoo! Finance**, **Google Finance**, or **dividend.com**, and find the current dividend yield for the following stocks:

- Altria Group
- Chevron
- Lockheed Martin
- Microsoft
- Pfizer

Write a brief report that addresses the following questions.

a. What is the average dividend yield for these stocks (dividend yield is the annual dividend divided by the stock price)?

b. How does the average dividend yield compare to what you can earn at a local bank or credit union?

c. What risks may exist for someone who invests in these securities to obtain the dividends?

d. Would you personally invest in one or more of these stocks? Why or why not?

Capital Gain Income

LO 3.5 Explain how to use capital assets to produce income and build wealth.

Do you know what the following people have in common?

- Bill Gates
- Jeff Bezos
- Warren Buffett
- Mark Zuckerberg
- Larry Ellison
- Michael Bloomberg
- Charles Koch
- David Koch
- Larry Page
- Sergey Brin

If you said all 10 of these people are unbelievably rich, you are correct! According to the Bloomberg Billionaires Index, Jeff Bezos, founder of **Amazon.com**, is the wealthiest living American. His net worth is an estimated $125 billion as of March 3, 2018. In the number 2 spot is Bill Gates, with a net worth of $90.7 billion. Sergey Brin, who cofounded **Google**, is the least wealthy of the 10 people listed; his net worth is only approximately $52.2 billion.

How did these people get so wealthy? The answer provides a clue that may help you achieve your own financial goals and dreams. First of all, they did not get rich by earning wages or salaries. They also did not increase their net worth dramatically by earning interest or dividends (although this did help). Instead, these people, and most other financially successful individuals, gained their wealth by creating or buying businesses, managing these "investments," and reaping the increased value of these holdings. Stated differently, these individuals became wealthy through the generation of capital gains.

Overview of Capital Gains

Although it is not everyone's financial goal, many people strive to maximize wealth over their lifetime financial journey. However, most people stop working at some point in their lives, thereby ending their source of earned income (see **Helpful Hint**). They must then rely on other sources of income. This discussion highlights an important source of unearned income: capital gains.

HELPFUL HINT

If you were born in 1960 or later, your normal retirement age is 67; however, retiring earlier at age 65 is a typical financial planning goal.

Capital Assets

To understand how assets can help you accumulate wealth, it is first necessary to be familiar with what it means to own **capital**. The **Internal Revenue Service (IRS)** says that almost everything you own or use for personal or investment purposes is a **capital asset**. Common capital assets include:

- Your home.
- Your car.
- Investments like stocks, bonds, and mutual funds.
- Ownership interest in a small business that you start.
- Rental or other real estate that you own.

When you buy a capital asset, the price you pay is called your **basis**. When you later resell the asset, one of three things will happen.

1. If you sell the asset for more than you paid for it, you will have a **capital gain**.
2. If you sell the asset for less than what you paid for it, you will have a **capital loss**.
3. You will break even on the sale if the price equals your basis.

Calculating Capital Gains

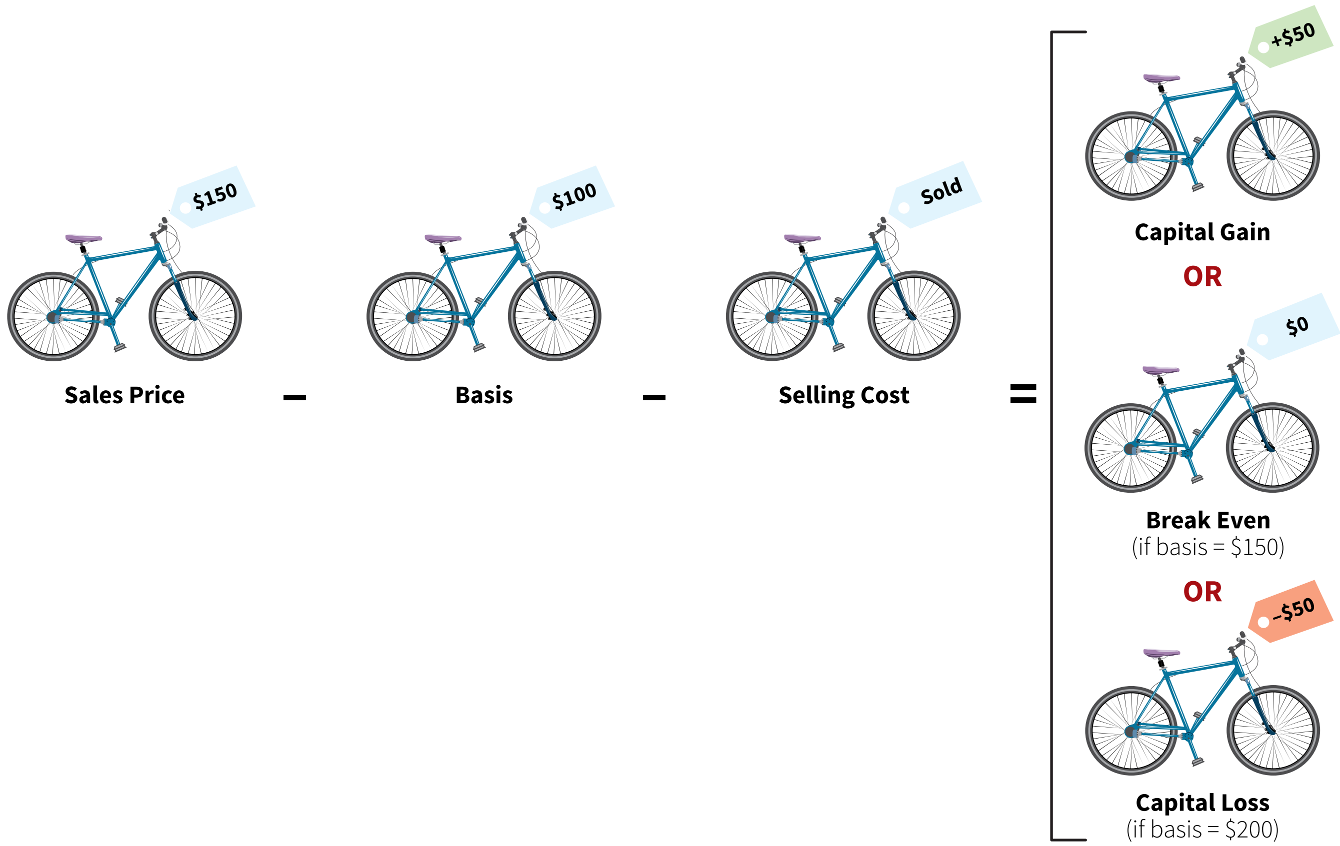
Current U.S. tax law requires you to report all capital gains (the amount in excess of what you paid for the asset) for tax purposes. If you have a capital loss, however, only losses coming from

the sale of an investment can be reported to the IRS. Some of these losses may reduce your tax liability. Losses on the sale of personal assets, such as your car or home, are not reported to the IRS and do not reduce your taxes.

- It is important to understand that you will only realize a capital gain or loss if you sell or exchange your capital asset for more than you purchased it.
- For example, if you own an investment that increases $10,000 in value but you do not sell the investment, you will not have to pay tax on the increase in value of the asset until you sell or exchange it.

Illustration 3.5.1 shows the basic formula for calculating a capital gain. Simply subtract your basis and what it costs to sell the asset (commissions and fees) from the sales price.

ILLUSTRATION 3.5.1 Capital Gains Formula



As noted above, three outcomes are possible when you apply the formula in Illustration 3.5.1.

1. **Profit:** Sales Price > (Basis + Selling Cost).
2. **Break Even:** Sales Price = (Basis + Selling Cost).
3. **Loss:** Sales Price < (Basis + Selling Cost).

For example, say you purchase a one-bedroom condo for $70,000 to live in while you attend school. The condo is considered a capital asset. Why? Because you now own it and it has some value. Now let's say that you graduate and sell the condo to someone else for $77,000. What is your capital gain or loss?

- The basis is your purchase price of the property ($70,000).
- The sales price is what you sell the condo for ($77,000).
- The selling cost includes real estate and legal fees. In this case, assume you sell the condo through a real estate agent who charges 6% of the selling price. Your selling cost will be $4,620 ($77,000 × 0.06).
- Using the capital gains formula, your **realized gain** is $2,380 ($77,000 – $70,000 – $4,620).

You can convert this dollar figure into a percentage rate by dividing the gain by the basis. In this case, the gain is 3.40% ($2,380 ÷ $70,000). This is shown in **Illustration 3.5.2**.

ILLUSTRATION 3.5.2

Calculating Capital Gains

Selling price	$77,000
– Basis (purchase price)	–70,000
– Selling costs	–4,620
= Realized capital gain	$ 2,380
Percentage rate increase ($2,380 ÷ $70,000)	3.40%

You may not get rich after selling your first condo. What really matters, though, is owning assets that will go up in value in the future. This is precisely what the 10 richest Americans did. They created companies and owned investments that grew in value over time. As those assets went up in value, so did their net worth (see **Helpful Hint**).

HELPFUL HINT

Going forward, you need to include capital assets in your overall financial plan as sources of wealth accumulation and unearned income.

Concepts in Action

Sarah wants to determine whether her investments have generated a capital gain over the past year. Using the following information, calculate (a) the gain or loss for each investment, (b) the total capital gain or loss for her total portfolio of assets (all combined), and (c) the percentage gain or loss on the WOLF stock.

Investment	Basis	Commission Paid to Purchase Investment	Commission Paid to Sell Investment	Current Price
WOLF stock	$1,000	$ 50	$50	$1,200
RAIDER bond	3,000	100	0	3,000
CAT stock	1,500	50	50	1,550
Silver coins	900	0	0	700
Gold jewelry	2,300	0	75	2,400

Solution

a. WOLF stock: $100 gain ($1,200 – $1,000 – $50 – $50)
RAIDER bond: $100 loss ($3,000 – $3,000 – $100 – $0)
CAT stock: $50 loss ($1,550 – $1,500 – $50 – $50)
Silver coins: $200 loss ($700 – $900 – $0 – $0)
Gold jewelry: $25 gain ($2,400 – $2,300 – $0 – $75)

b. Overall, Sarah's portfolio generated a $225 loss for the year.

c. The WOLF stock generated a 10% capital gain ($100 ÷ $1,000).

How to Achieve Capital Gains

The concept of capital gains is relatively straightforward.

1. You buy or somehow obtain an asset.
2. You hold the asset for some length of time, usually enough time to allow it to go up in value.
3. You sell the asset.

If you make money by getting more than your basis plus transaction costs, you have a capital gain. If you lose money, you have a capital loss. If you neither make nor lose money, you break even.

The Basis of Assets

The basis of property, or your cost of the asset, has an impact on your capital gain outcome. The concept of basis can get complicated. Here is a simple way to think about basis.

HELPFUL HINT

When you use investment earnings to purchase more of the underlying investment, the basis of your investment increases. Reinvesting dividends is a common example of this practice.

- The basis of investment assets (such as stocks) you purchase is generally the purchase price plus any costs of acquiring the asset, such as commissions and recording or transfer fees (see **Helpful Hint**).
- If you obtain an asset from someone else as a gift, then your basis is usually the lesser of the fair market value (FMV) when you receive the property or the previous owner's adjusted basis.
- If you inherit an asset because someone died, your basis becomes the fair market value as of the person's date of death (sometimes 6 months after death if that increases the value). This is called receiving a **stepped-up basis**. The tax implications of receiving property in an inheritance is usually better because the new basis will be higher, which reduces the amount of the capital gain.

You will learn later in the text that the IRS splits capital gains into short- and long-term categories. If you hold an asset for more than 1 year and then sell it, this is considered a **long-term gain**. Tax rates on long-term gains are lower than short-term capital gain rates.

Value of Assets

Note that it is not necessary to sell something to reap the rewards of owning a capital asset. In fact, the 10 richest Americans have rarely sold the assets that made them wealthy!

- The key to generating wealth through capital assets is to own property and investments where an active marketplace exists.
- Value is determined in the marketplace based on what buyers are willing to pay sellers for capital assets.

Let's see how one of the richest American got that way. As you may already know, as a young man, Bill Gates cofounded **Microsoft**. As a co-creator, Gates owns millions of shares in his own company that he did not have to buy (although he did invest much of his own money and time in creating the company). When Microsoft was a new company, you could invest in the firm by buying shares for a mere 7 cents. In 2016, one of those shares was worth more than $50. You can see the price history of Microsoft in **Illustration 3.5.3**.

ILLUSTRATION 3.5.3 **Microsoft Price History**

Over the 30-year period between 1986 and 2016, the value of Microsoft stock increased at close to a 30% annual rate. Using the Rule of 72, you know that Bill Gates has doubled his wealth from the company approximately every 2½ years (72 ÷ 30 = 2.4). Even though he rarely sells his shares, the market value of the shares continues to increase. The takeaway here is this: Follow in Bill Gates' footsteps by taking the following actions.

- Buy assets that have the potential to go up in value.
- Hold those assets over the long term.
- Let the power of compounding generate unearned income.

You just might be able to live off your investment income sooner than you thought you could!

End-of-Topic Assessment

Multiple-Choice Questions

1. The wealthiest people in the United States obtained their wealth through:

- **a.** inheritance.
- **b.** wages and earnings.
- **c.** creating or buying assets that increased in value over time.
- **d.** lottery winnings.

2. Which of the following is *not* a capital asset?

- **a.** Bank account.
- **b.** Your human capital.
- **c.** Your home.
- **d.** Mutual funds.

3. Identify the correct capital gain calculation.

- **a.** Sales Price – Basis – Selling Costs = Gain/Loss.
- **b.** Basis – Sales Price – Selling Costs = Gain/Loss.
- **c.** Sales Price + Selling Costs – Basis = Gain/Loss.
- **d.** Basis – Sales Price + Selling Costs = Gain/Loss.

4. **Calculate** Larry has been an active postage-stamp collector for a number of years. A few years ago, he bought a rare U.S. postage stamp for $2,500. He has now decided to sell the stamp. If he sells it at an auction and receives $3,000 but pays a 20% sales commission on the amount received, what will be Larry's capital gain or loss?

- **a.** Gain of $100.
- **b.** Gain of $500.
- **c.** Loss of $100.
- **d.** Loss of $400.

5. **Calculate** Helen recently purchased 100 shares of a company for $10,000 ($100 per share). The company has been doing well. This year, she received a dividend of $1,000. Given the success of the company, her shares are now worth $300 each. What would be Helen's capital gain, in percentage terms, if she sold her shares today?

- **a.** 100%.
- **b.** 200%.
- **c.** 300%.
- **d.** There is not enough information to answer this question.

6. **Calculate** Lucas purchased 100 shares of UGA Corporation for $10 per share last year. He received a $1 dividend per share. If he sells all of the shares for $12 each, what will be his capital gain in percentage terms?

- **a.** 17%.
- **b.** 20%.
- **c.** 25%.
- **d.** 30%.

7. **Calculate** Bob likes to buy and sell things. Assume Bob made the following transactions: he bought an antique for $300 and sold it for $500; he bought shares of stocks for $1,000 and sold the shares for $500; and he bought a car for $9,500 and sold it for $9,800. Overall, Bob:

- **a.** realized a gain.
- **b.** incurred a loss.
- **c.** broke even.
- **d.** earned a $200 dividend.

8. **Calculate** Helen recently purchased 100 shares of a company for $10,000 ($100 per share). The company has been doing well. This year, she received a dividend of $1,000. Given the success of the company, her shares are now worth $300 each. What is Helen's per share *basis* in the company?

- **a.** $100.
- **b.** $300.
- **c.** $1,000.
- **d.** $10,000.

9. **Calculate** Helen recently purchased 100 shares of a company for $10,000 ($100 per share). The company has been doing well. Given the success of the company, her shares are now worth $300 each. This year, she received a dividend of $1,000, which she reinvested to purchase 3.33 shares of stock in the company. How does Helen's decision to reinvest her dividend (buy more stock) affect her total basis in the investment?

- **a.** Helen's total basis invested increased from $10,000 to $11,000.
- **b.** Helen's total basis increased from 100 shares to 103.33 shares.

c. Helen's total basis decreased to $9,000 and then increased back to $10,000.

d. Helen's total basis is not affected by reinvesting her dividends.

10. **Calculate** How long would it take, approximately, for you to double your money if your investment earned on average a 12% return?

a. 4.5 years.

b. 6 years.

c. 9 years.

d. 11.5 years.

Adventures in Personal Finance

Short Answer

1. Match the following terms with the correct definition.

a. Capital asset.

b. Basis.

c. Capital gain.

d. Capital loss.

1. Occurs when the sale price of an asset is less than the basis of the property.

2. Something you own that can be used for personal or investment purposes.

3. Occurs when the sale price of an asset is greater than the basis of the property.

4. The price you pay for an asset.

2. **Calculate** Latisha recently visited a flea market. As she was passing one sales booth, she spotted an old clock. She liked the funky look of the clock, so she decided to offer the seller $35. After a bit of haggling, she ended up paying $40. As she was walking through the market with the clock later that day, someone came up to her and offered her $100 for it! Latisha was both surprised and happy. If she sells the clock, what will be her capital gain? Would you say that this is a short- or long-term gain or loss?

3. Kristy is conducting a year-end review of her financial situation. As part of the review, she is attempting to determine the different sources of her income. Here are her notes.

a. $15,000 based on 20 hours of work at $15 per hour for 50 weeks.

b. $1,400 from the sale of property for $2,000 with a basis of $600.

c. $900 in tips.

d. $300 based on 3.0% APY on money deposited at the bank.

e. $100 from profit distributions made to shareholders.

Match each source of income with the correct category listed here.

I. Earned income.

II. Unearned interest income.

III. Unearned dividend income.

IV. Unearned capital gain income.

Explore

1. **Writing** Write a brief research report on one of the 10 wealthiest Americans listed in this topic. Pay special attention to the way in which the person achieved his or her wealth, for example, through a salary, interest, dividends, capital gains, or some combination of these methods.

2. **Writing** Tax law contains some favorable provisions for homeowners. Congress has included these tax benefits for homeowners in the tax law because Congress wants to promote homeownership. Do some research on the **IRS** website and find out how much gain on a personal residence can be excluded from income. A simple search might be "gain exclusion personal residence." Are there any requirements that a homeowner must meet to exclude part of her or his gain? Write a two-page summary of what you find. Be sure to include the general requirements that homeowners must satisfy to qualify for any exclusion.

Expanded Learning Activity

Writing Visit the **IRS** website. Do a key word search using "capital gains." Review how the IRS defines a short- and long-term gain and how the IRS taxes each type of gain. Write a reaction paper summarizing and describing your findings. Be sure to include your opinion about the fairness of the current capital gain tax rates.

Government Benefits: The Safety Net for Income

LO 3.6 Explain financial safety-net programs available to employees and citizens

Cruise ships are famous for their indulgent dining, seemingly nonstop entertainment, and activities of all kinds. In short, cruises can be exciting and pleasurable. However, have you ever noticed the lifeboats aboard every cruise ship? Lifeboats are small and have absolutely no extra features. Their only purpose is to keep people afloat until they can be rescued.

You can think of your lifetime financial journey as a cruise ship. Your earned income (from wages, salaries, commissions, and bonuses) and unearned income (from savings and investments) will allow you to amass the resources you need to live and enjoy the life that you want. But just like a cruise ship, you need to have an emergency plan—your own lifeboat—in case things don't go as expected. In this topic, we discuss government support that is available to help people survive during difficult times until they are able to improve their own financial circumstances.

Government Financial Assistance

If you search the Internet, you are likely to find numerous government agencies that provide some type of support for individuals and families facing difficult times. These government benefits (often referred to as **government transfers**) can be categorized into the following four groups.

1. Unemployment benefits.
2. Medicaid.
3. SNAP and TANF.
4. Grants.

To show how these types of government transfers work in practice, let's use an example. Say that Frank and his partner are expecting their first baby in 3 months, but Frank just learned from his employer that he will be laid off next week. What should Frank do? Of course, Frank should immediately start looking for another job, examine his budget and reduce expenses, and check his emergency savings to see how long those funds will last given his revised budget. But depending on how long Frank's unemployment lasts, he may want to also consider resources from the state and federal government for which he and his family may qualify.

Unemployment Benefits

Frank can apply for **unemployment benefits**, which are cash payments made to individuals who have recently lost their job due to no fault of their own. This is what Frank needs to know about unemployment benefits:

- The amount and duration of unemployment benefits Frank will qualify for depends on how much he was earning immediately prior to losing his job (see **Helpful Hint**).
- These benefits typically last for 26 weeks or less.
- The maximum unemployment benefits that Frank can receive are capped. Similar to a lifeboat, these benefits will help sustain his family's basic needs, but benefits will not sustain his family's lifestyle. Depending on Frank's current lifestyle, his unemployment benefits payments may not even cover his rent, or they may be able to cover a few bills beyond rent.

HELPFUL HINT

Unemployment benefits are a form of public insurance; the premiums for this insurance are paid by employers each time an employee is paid.

Let's say that Frank makes (after payroll deductions) $4,000 per month or about $925 per week. Given the upcoming layoff, Frank and his partner cut their budget to the bare minimum—rent, car loans, gas, insurance, utilities, and food. They think they can squeeze by on $500 per week. Unfortunately, the state in which Frank and his family live caps unemployment benefits at $300 per week, which means that Frank and his family have an income gap of $200 per week. Further, these unemployment benefits only last for 26 weeks.

The good news for Frank and his family is that over the past 5 years, they have stashed away $10,000 in emergency savings.

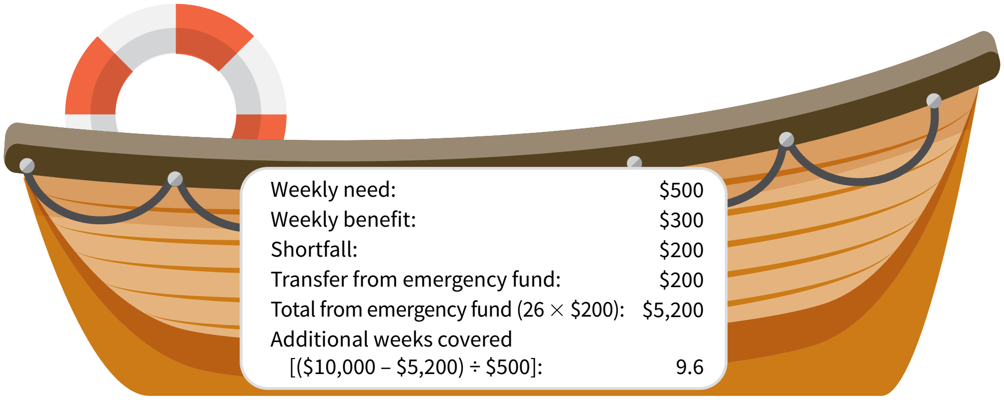
- As shown in **Illustration 3.6.1**, the combination of unemployment benefits and the emergency fund acts as a financial lifeboat.
- Without unemployment benefits, Frank would have depleted his family's emergency savings in just 20 weeks.
- Instead, the emergency fund can be used to make up the difference between the family's financial needs and the amount Frank can expect to receive in unemployment benefits.
- If Frank is still unemployed after 26 weeks, he will have $4,800 remaining in the emergency fund, which will provide almost 10 additional weeks of income (see **Helpful Hint**).

HELPFUL HINT

An emergency fund also allows time to focus on finding new employment or developing new skills to improve one's ability to find work. Financial planners recommend an emergency fund of 3–6 months of expenses.

ILLUSTRATION 3.6.1

Unemployment Benefits and Emergency Fund as a Financial Lifeboat



Concepts in Action

Kyle studied chemical engineering in college. When he graduated earlier this year, he was immediately employed by a small oil-drilling company. He was paid an annual salary of $60,000. His employer provided generous fringe benefits, including 3 weeks of paid vacation, 100% employer-paid health insurance, a life insurance benefit, and sick leave. Unfortunately, his firm has run into a string of nonproducing wells, and Kyle learned that he was going to lose his job. When he called his state's Department of Labor, he learned that based on his income he will receive $320 per week in unemployment benefits for up to 26 weeks. He also learned that during this time, he will need to be actively seeking new employment to receive the unemployment benefits.

Help Kyle answer the following questions.

a. Approximately how much is he earning weekly right now?

b. How much will his weekly income shortfall be when his employment is terminated?

c. What percentage of his income is being replaced by unemployment insurance?

d. What steps should Kyle have been taking to prepare for this type of situation?

Solution

a. He currently makes approximately $1,154 per week, plus fringe benefits.

b. His shortfall is approximately $834 per week ($1,154 – $320).

c. The unemployment insurance is replacing less than 28% of his weekly income ($320 ÷ $1,154).

d. Kyle should have built an emergency fund by saving at least 12% of his weekly income. In addition to actively saving for an emergency fund, Kyle should have focused on building his social capital through networking so that if he needed a job in the future he would have an active referral network.

Medicaid

If Frank is unemployed for a long period of time, he will quickly realize that his employer helped cover other regular expenses that he must now pay for directly. These **fringe benefits** represent assistance provided to employees as part of their overall compensation package (see **Helpful Hint**).

Although employees rarely see fringe benefits as income (most are not taxed), employers certainly view these benefits as part of every employee's compensation package. For example, someone who earns $50,000 per year may receive $25,000 or more in fringe benefits. The bulk of these costs come from health insurance benefits, contributions to retirement plans, and vacation pay.

When he loses his job, Frank will also lose his fringe benefits. This means that Frank will need to replace not only his lost wages but also the fringe benefits he and his family have come to rely on, such as health care for his pregnant partner.

HELPFUL HINT

Typical fringe benefits include health insurance, retirement savings, and sick and vacation pay.

- As a temporary measure, Frank can apply for Medicaid, or a state-run equivalent program funded in partnership with the federal Medicaid program. **Medicaid** is a health insurance program for low-income households.
- Each state has different qualification rules, so Frank will need to check with his local health department or child and family services department to find out if he or his partner qualifies for coverage.
- Note that Frank and his partner may also qualify for **Medicare**, a federally run health insurance program for elderly individuals, when each reaches age 65.

SNAP and TANF

In addition to unemployment benefits and Medicaid, Frank should also consider applying for other assistance depending on his family's needs (see **Helpful Hint**). Two programs are available to provide short-term help for Frank and his family.

HELPFUL HINT

The best way to apply for these benefits is to visit, either in person or online, your state's Department of Human Services. Sometimes these benefits are administered by a state's Family and Community Services Division of Human Services.

1. **Supplemental Nutrition Assistance Program (SNAP)**, which provides money to low-income households to purchase food (also commonly referred to as food stamps).
2. **Temporary Assistance for Needy Families (TANF)**, which provides supplemental income to very-low-income unemployed households, typically with children.

To apply for these benefits, Frank will need to provide evidence of his financial situation, proof of U.S. residency (in most states), and verification of each family member's age and earnings situation. Given the facts of the case as presented, Frank should qualify for some coverage during an extended term of unemployment. Any benefits received will be extended to his immediate family as well.

Grants

Another form of government transfer is a grant. A popular federal grant is the **Federal Pell Grant Program,** which provides financial aid for low-income undergraduate and certain post-baccalaureate students. Students may use their grants to progress toward a degree at any one of approximately 5,400 participating postsecondary institutions in the United States. Grant amounts depend on:

- The student's expected family contribution (EFC).
- The cost of attendance (as determined by the institution).
- The student's enrollment status (full-time or part-time).
- Whether the student attends for a full academic year or less.

Students may not receive Federal Pell Grant funds from more than one school at a time, nor are Pell Grants typically available for a second degree. In Frank's case, he may want to consider applying for a grant so that he can go back to school to learn a new trade or skill that will help him to be more competitive in the job market.

Other Sources of Assistance

Sources Based on Earnings History

Some government benefits are determined by earnings or earnings history. An **earnings history** is a record of how much taxable income has been earned for each year of an individual's working life. Government benefits are capped and cannot exceed a certain threshold amount; however, the higher the earnings history, the greater the government benefits to which the individual will have access. Let's consider Frank's case. He may qualify for the following benefits:

- Large tax refunds when Frank files his annual income tax return.
- Education benefits and potentially health benefits through the Veterans Administration if Frank has served in the U.S. military.
- If Frank were to become disabled, he might qualify for Social Security disability benefits. We will discuss Social Security in more detail later in this topic.

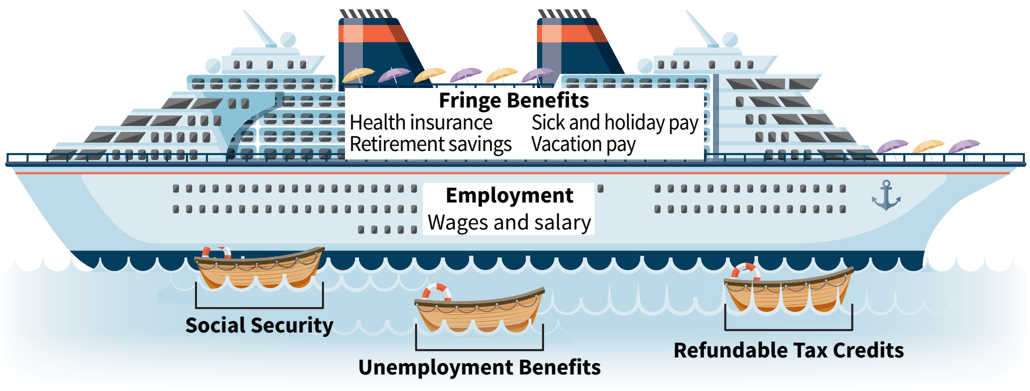
Refundable Tax Credits

Frank might qualify for one or more refundable tax credits. A **refundable tax credit** reduces the amount of tax someone must pay. A refundable tax credit not only reduces the amount of federal tax owed, but if the credit exceeds the tax liability, the difference can be received directly by the taxpayer. There are several refundable tax credits available.

- The **Earned Income Tax Credit** is a refundable credit for people who work and do not earn a lot of money. There is a maximum amount based on family size. Eligibility is determined based on earnings, tax filing status, and eligible children. Workers without children may be eligible for a smaller credit; however, this is limited to those with very low income levels.
- The **Child Tax Credit** reduces a taxpayer's liability up to $2,000 for each child younger than age 17. A portion of the credit is refundable.
- The **American Opportunity Tax Credit** helps offset some of the costs of higher education. The American Opportunity Tax Credit applies to the first 4 years of postsecondary education. The maximum credit is $2,500 per eligible student; however, up to 40% of the credit ($1,000) is refundable.
- The **Premium Assistance Tax Credit** allows some taxpayers who purchase health insurance through a health insurance exchange to receive a subsidy that comes as a refundable tax credit.

Illustration 3.6.2 highlights the many different types of government support that Frank may be able to use during his financial emergency. When combined with his family's personal

ILLUSTRATION 3.6.2 **Work-Related Benefits and Government Benefits**



savings, these government support systems provide a financial lifeboat that can help people like Frank until they are able to find a new job and get back on their feet financially.

Social Security

Nearly everyone working today has one common goal: to not have to work sometime in the future and officially retire. This may be a goal that you also have set for yourself. If you see retirement as a point of accomplishment in your financial journey, do you expect to receive any retirement benefits from Social Security when you stop working?

Social Security benefits are based on earnings history. If you have sufficient earnings history, you or your dependents may qualify for the following benefits under the Social Security program.

- Retirement benefits when you retire.
- Disability benefits if you become disabled.
- Family benefits if you were to die while you are providing for children younger than age 18.

Funding Status

As with any government payment, the source of this money comes from taxes or government borrowing. Social Security funding comes specifically from FICA OASDI payroll taxes and self-employment taxes (see **Helpful Hint**). Some young adults today do not expect to receive anything in Social Security payments by the time they retire. Consider what the **Social Security Administration** recently reported:

- The future unfunded liability of the Social Security program is close to $10 trillion.
- This means after all taxes have been collected and any accumulated funds have been exhausted, the federal government has promised more than $10 trillion more in benefits over the next 75 years than it has the ability to pay under current laws.
- If the system remains underfunded, the Social Security Administration will be able to pay only about $0.74 of each dollar of promised benefits.

This is both good and bad news for those currently working. The good news is that you probably can expect to receive something from Social Security when you retire. The bad news is that whatever you receive may not be as much as you need.

HELPFUL HINT

FICA stands for Federal Insurance Contribution Act; OASDI for Old Age Survivors and Disability Income.

Pay-As-You-Go Program

The Social Security program is among the largest sources of income for retirees. What makes the system unique is that Social Security functions primarily as a pay-as-you-go funding system. As shown in **Illustration 3.6.3**, **pay-as-you-go programs** collect current taxes to pay current benefits.

ILLUSTRATION 3.6.3

Pay-As-You-Go Taxes Passing Through to Retirees

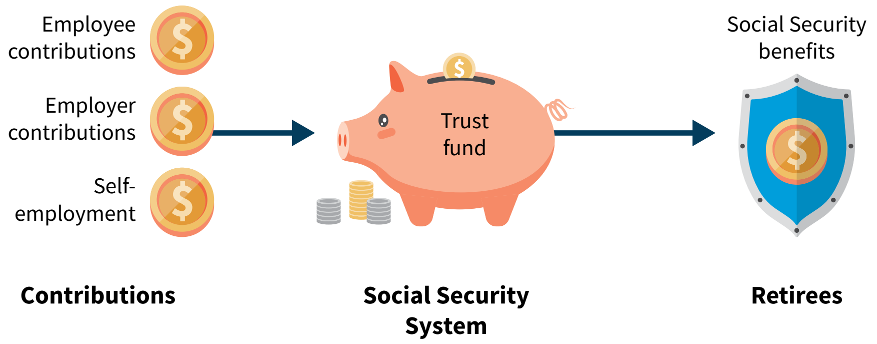
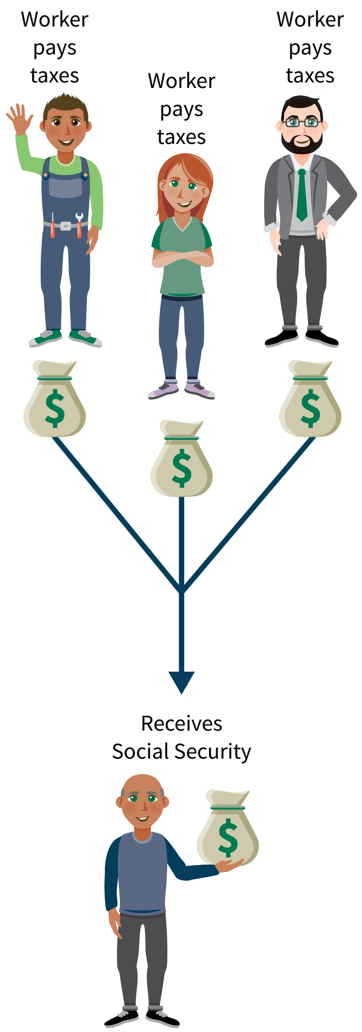


ILLUSTRATION 3.6.4

Three Workers Support One Retiree Through Social Security Taxes and Benefits



In the case of Social Security benefits, the program works as follows.

1. Employees pay FICA taxes and self-employment taxes into the Social Security system each time they get paid.
2. FICA taxes are split between the employee and employer.
   - The combined FICA tax rate for both employees and employers is 15.3% of gross income, with 12.4% going toward Social Security and 2.9% being funneled to Medicare (the employee pays half, or 7.65% (6.2% + 1.45%), and the employer pays half, or 7.65% (6.2% + 1.45%)).
   - Self-employed workers pay 100% of FICA taxes, although they receive a tax deduction for a portion of the tax paid.
   - The Social Security portion of the tax is capped for high-income earners.
3. To receive a Social Security retirement benefit, individuals must have at least 10 years of earnings that were subject to Social Security taxes.
4. Taxes collected are then immediately used to pay the monthly benefits of current retirees and other Social Security recipients. Any extra money collected is set aside for later distribution.
5. Individuals can choose to receive a reduced Social Security benefit at age 62. For people born after 1959, they can receive their full benefit at age 67. If they wait until age 70, their benefit will be larger. Most people hope to retire before age 67.

As shown in **Illustration 3.6.4**, currently three workers support one Social Security beneficiary. However, by the year 2030, this ratio will drop to about two workers supporting one beneficiary. Why? Because people are living longer and having fewer children. Thus, under the current pay-as-you-go system, the Social Security Administration may only be able to pay about three-fourths of promised benefits.

The important thing to recognize is that future Social Security benefits will likely be different from those promised under the current law. For full benefits to be paid out in the future, policymakers will need to consider one or all of the following changes:

- Raise Social Security taxes.
- Reduce the currently structured benefits.
- Reverse demographic trends by encouraging higher birth rates or increased immigration (it is also possible that adverse conditions may decrease life expectancies).

End-of-Topic Assessment

Multiple-Choice Questions

1. A cash payment made to someone who recently lost his or her job is called a(n):

- **a.** fringe benefit.
- **b.** Social Security.
- **c.** Medicaid.
- **d.** unemployment insurance benefit.

2. When faced with financial emergencies, such as unemployment, individuals and families should first use:

- **a.** emergency savings.
- **b.** unemployment benefits.
- **c.** borrowed money.
- **d.** emergency savings and unemployment benefits.

3. Lionel recently lost his job at a local factory. Unfortunately, he has also been experiencing several severe health challenges. The expenses associated with his medical issues have depleted his savings. Which of the following government benefits could Lionel apply to for help with his medical expenses?

- **a.** Medicare.
- **b.** Social Security.
- **c.** Sick and Casualty Coverage.
- **d.** Medicaid.

4. Someone who qualifies for Medicaid may also be eligible for:

- **a.** Supplemental Nutrition Assistance Program (SNAP) benefits.
- **b.** Temporary Assistance for Needy Families (TANF) benefits.
- **c.** refundable tax credits.
- **d.** SNAP, TANF, and refundable tax credits.

5. Money used to make transfer payments from the government to individuals comes from:

- **a.** the Federal Reserve.
- **b.** taxes and borrowing.
- **c.** revenue generated from oil and gas permits.
- **d.** interest earned on the Social Security trust funds.

6. All of the following are related to a person's current income, *except*:

- **a.** Social Security benefits.
- **b.** Temporary Assistance for Needy Families.
- **c.** Supplemental Nutrition Assistance Program.
- **d.** education grants and loan subsidies.

7. All of the following are employer-provided benefits, *except*:

- **a.** Social Security.
- **b.** wages.
- **c.** health insurance.
- **d.** sick and holiday pay.

8. How are Social Security benefits currently funded and paid to beneficiaries?

- **a.** Earnings from each participant's account are used to fund payments.
- **b.** Interest from government bonds are used to pay benefits.
- **c.** Taxes from current workers are used to fund payments to current retirees.
- **d.** Retirees are taxed on unearned income and these taxes are then used to make payments to current retirees.

9. Nearly every working adult living in the United States contributes to the Social Security system. How can someone access Social Security benefits?

- **a.** Be at least age 62 and retired.
- **b.** Become permanently disabled.
- **c.** Apply as soon as she or he has paid Social Security taxes for at least 10 years.
- **d.** Be at least age 62 and retired, or become permanently disabled.

10. **Calculate** Linda earns $83,000 per year as an employee. How much will she pay this year in Social Security taxes? (*Hint*: Only calculate Linda's share of the tax.)

- **a.** $6,349.50.
- **b.** $5,146.00.
- **c.** $1,203.50.
- **d.** $0 because she is not retired.

Adventures in Personal Finance

Short Answer

1. **Writing** Government transfer programs exist in a variety of settings. Take a moment and figure out if you currently receive any benefits under a direct government transfer to you. These benefits may come in the form of federally funded or state-funded financial aid for school, income tax refunds greater than the amount of taxes that were withheld from your paycheck, or any number of other situations. Write a one-page response addressing the following questions.

- **a.** What do you think the government's motivation is in giving you transfer payments (in any form)?

   b. How long do you think you will receive these benefits?
   c. Will the benefits help you accomplish anything? If they do help you accomplish something, will you still be eligible for the benefits?
   d. Explain where money used to make transfer payments from the government to individuals comes from.

2. Label whether each of the following benefits is related to (I) earnings history (or past employment), (II) not based on earnings history or past employment, or (III) benefit based on current year income.
   a. Temporary Assistance for Needy Families.
   b. Supplemental Nutrition Assistance Program.
   c. Military service member's education benefits.
   d. Social Security retirement benefits.
   e. Medicare.
   f. Education grants and loan subsidies.
   g. Unemployment benefits.

Explore

1. **Writing** Go online and find a summary of the Social Security trustee's annual report. Use the report to answer the following questions in a brief paper.
   a. In what year is the Social Security trust fund expected to be completely depleted?
   b. How many people currently receive benefits from the Social Security program?
   c. When comparing how much money went into trust funds and how much money was paid out of the trust funds, are current taxes being paid into the trust fund sufficient to cover current expenses of the trust fund?
2. **Writing** Social Security is one of the largest government transfer payment programs. The other large one is Medicare. Go online and research what the unfunded liability of the Medicare program is. Write a one-paragraph summary of your research, noting how much the unfunded liability is, what is causing the imbalance, and how it could be fixed.
3. **Presentation** Several European countries are currently experiencing negative population growth. This means that these countries have more deaths than births. Research this phenomenon and comment on (a) the impact that negative population growth has on the funding of government programs and (b) what some of these countries are doing to reverse their population growth. Share the results of your research with others in class.

Expanded Learning Activity

Writing **Presentation** It is very easy to become frustrated trying to figure out what programs are available during a financial emergency, such as a period of unemployment. To help individuals who are facing unemployment, the **United Way** has established a 2-1-1 hotline so that people can learn what resources are available in their communities and how to apply for these programs. Visit your local United Way office or website and access the 2-1-1 hotline information. After reading the materials or discussing the resources with a United Way representative, summarize your findings in a brief paper. Be sure to share your findings with others in class.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

3.1 Discuss how to create wealth through increasing income, limiting expenses, and investing in your human capital. As you continue on your financial journey, it is important to constantly be checking your progress toward goal achievement. One way to do this is to ensure that you are generating an income surplus on a regular basis. This means spending less than what you earn. In addition, it is important to save a proportion of your overall earnings on a regular basis. You should focus on saving at least 12% of your income each month. It is also important to keep your debts manageable. The highest total debt-to-income ratio discussed in this chapter is 36%, which means that you should strive to keep your monthly debt payments well below 36% of your gross income.

3.2 Identify the different forms of employee earnings. Earned income can be categorized into one of four groups: (1) wages, (2) salaries, (3) bonuses, and (4) commissions. The majority of workers make their living through an hourly wage. Each state sets a minimum hourly wage rate that can generally not be less than the national minimum wage. Those who earn a wage are eligible for overtime if they work more than 40 hours per week. Professionals are typically paid a salary and are not generally eligible for overtime pay. Both wage earners and those on a salary may receive a bonus, but this type of income is variable and never guaranteed. Finally, some workers sell products and services and receive a commission—usually a percentage of the sales price—as compensation.

3.3 Compare the financial pros and cons of self-employment and ways to structure a business. Approximately 10% of all workers are self-employed. This means that they own their own business, set their own work hours, and receive income from their business. For those who are interested in starting a business, it is important to understand how the type of business structure used can influence governance and taxation. Although a business can always be a sole proprietorship, financial planners typically recommend that business owners incorporate or use a limited liability company to limit personal liability arising from business activities.

3.4 Discuss the sources and characteristics of unearned income. Total household income is comprised of two elements: earned and unearned income. Although there are many forms of unearned income, including lottery winnings, inheritances, and government transfers, interest and dividends are important for those wishing to accumulate wealth over their lifetime. Interest is received whenever you lend money to someone else. Dividends are received by those who invest in businesses. Taken together, interest and dividends make up an important portion of household income, especially among those nearing or in retirement.

3.5 Explain how to use capital assets to produce income and build wealth. Capital gains help explain why some people achieve astounding wealth. Historically, the wealthiest individuals tend to be investors, particularly those who start and hold onto profitable businesses. A capital gain occurs when an asset is sold for more than its purchase price. The IRS taxes capital gains differently than earned income. A long-term capital gain—the profit made on the sale of an asset held for more than one year—is taxed at a substantially lower rate than either short-term gains or regular earned income.

3.6 Explain financial safety-net programs available to employees and citizens. Everyone needs an emergency source of income and a financial safety net. The government often provides such a safety net. Government benefits for the needy—unemployment compensation, refundable tax credits, SNAP, and TANF—are examples of benefits for those who are financially needy. The government also provides a foundation of income and health insurance for those who have paid taxes and contributed to Social Security and Medicare. Although the future of Social Security is uncertain, the role of government in providing a social safety net is undebatable.

Continuing Case: Tarek's Financial Journey

Let's catch up with Tarek. Tarek has previously developed the following budget and balance sheet.

Tarek's Personal Monthly Budget	
Wages	$3,900
Interest	90
Income	$3,990
Taxes	883
Rent	850
Vehicle insurance	200
Food and eating out	290
Car payment	395
Student loans	298
Sports and hobbies	240
Phone and household	100
Retirement	156
Vacations	300
Credit cards	275
Expenses	$3,987
Surplus/Deficit	

Tarek's Balance Sheet	
Assets	
Checking	$ 350
Savings	1,100
Automobile	11,000
Motorcycle	3,750
Furnishings	800
Clothes	2,100
Other household	900
Sports equipment	2,500
Collections	750
401(k)	19,000
Total Assets	$42,250
Liabilities	
Credit cards	$ 3,500
Student loans	25,900
Car loans	3,000
Total Liabilities	$32,400

Instructions

Use Tarek's budget and balance sheet information to answer the following questions.

a. What is Tarek's budgeted income surplus?

b. What is his budgeted savings ratio? How does this compare with the recommended benchmark?

c. What is Tarek's total debt-to-income ratio? How is he doing compared to the recommended benchmark? What can he do to improve his situation?

d. Based on a month having 4 weeks and assuming Tarek works 40 hours per week, what is his hourly wage rate? How does this compare to the national minimum wage?

e. Assume that Tarek paid $400 for his collections. If he sold the collections today for market value and paid no sales fee or commission, what will be his total capital gain? What is this amount in terms of a percentage?

Calculating the Cost of Life's Financial Journey

An important takeaway from this chapter is the need to save a portion of every dollar earned. Using an accelerating personal savings rate is one strategy to help someone save effortlessly.

Instructions

Answer the following questions based on this strategy.

a. Assume that you begin saving 3% of your total income in an employer-provided retirement plan at work. How long will it take for you to be saving at least 20% of your income if your employer provides a 4% wage increase yearly and you save half of each year's increase?

b. Based on your calculations from part a, how much will you be saving (using the end-of-year savings rate) over the next 10 years if you earn $30,000 this year?

Planning for the Future

Tom and Lucy Handy started selling T-shirts out of the trunk of their car at craft shows around the southern United States 4 years ago. Their business has grown dramatically. Other than paying taxes on their earnings, they have not done any formal business planning. In fact, their business has been so popular with crafters that they have started accepting online orders. They are now at a point where they are considering quitting their day jobs and focusing on the T-shirt business full-time. Tom and Lucy need some help thinking about their business.

Instructions

Use the information from this chapter to answer the following questions.

a. Given the way the Handys started their business, what form of business structure do they currently have? Is this an appropriate business structure?

b. What type of business structure can they use that would limit their liability but be easy to set up and manage?

c. Two years ago, Tom and Lucy purchased an original oil painting for $43,000. When they bought the painting, Lucy was sure that the piece would soon become collectible. Now that their business is doing well, they want to expand. Rather than take out a loan, Tom has suggested selling the painting. If they sell the painting at auction for $50,000 and pay a 20% seller's fee, how much will they make on the sale? Show the actual amount and the percentage gain or loss.

d. If they both quit their day jobs, what will they be giving up in addition to wages and salaries?

e. When they quit their jobs, will they be eligible for unemployment benefits?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER 4

Personal Taxation


JGI/Jamie Grill/Blend Images/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

4.1 Explain the purpose and types of taxes.

4.2 Describe how to calculate taxable income.

4.3 Describe how to calculate marginal and effective tax rates on income and capital assets.

4.4 Discuss how federal income tax credits for education, health insurance, and households with children can help to lower income taxes.

4.5 Explain how to apply Medicare and Social Security taxes to self-employed individuals.

4.6 Identify income tax-planning strategies to minimize taxes and maximize after-tax wealth.

One of the most important foundational concepts that will help prepare you for a successful lifetime financial journey is a knowledge of taxation. For better or worse, any time you earn or spend income, a portion of it will be used to pay taxes. Taxes are imposed by governments—ranging from your local city or county assessing a sales tax or property tax, to the federal government imposing payroll taxes or an income tax—as a tool to raise money to pay for the services that governments provide.

The humorist Will Rogers said, "Income tax has made more liars out of the American people than golf." While people may be motivated to underreport the amount of income earned or overstate deductions as a way to lower their taxes, the penalties for doing so can be financially painful. And although the vast majority of U.S. taxpayers are honest when reporting their taxes, the **Internal Revenue Service (IRS)** can and does penalize those who misreport their income taxes. However, even the honest at heart can easily become confused about how much tax they owe. In this chapter, you will learn that your goal is not to eliminate paying taxes but how to maximize your after-tax wealth by minimizing your tax liability over your lifespan.

The Inescapable Reality of Taxation

Regardless of how you feel about paying taxes, you will likely have to pay a significant amount of income toward taxes over your lifetime. When all types of taxes are included, a typical single individual may pay 20–30% of earned income in taxes. Higher-income individuals may pay as much as 37% or more of their earned income in taxes. The remainder, after taxes are paid, is what you can spend and save.

You will learn in this chapter that there may be times in your life when you may actually be paid by the U.S. government when you file your tax return. The government has established social welfare safety nets. For example, you will learn about refundable income tax credits, which are transfers from the government to households at tax time that can occur even if someone has not paid any taxes all year long. In addition, you will be introduced to the basic structure of U.S. income tax laws. (Your state or local government may also impose an income tax, so we encourage you to learn about your state's income tax laws.)

Let's begin by seeing how tax-savvy you are about the U.S. tax system. How many of the following questions can you get correct?

What Do You Know About Taxes?

	True	False
1. Wage earners in the United States pay a predetermined flat amount, or fixed percentage, of their income toward federal taxes.	☐	☐
2. The national sales tax is currently 1.6% of gross purchases made by a consumer (including all family members).	☐	☐
3. While some states require their citizens to pay income taxes, 35 states are tax-free zones.	☐	☐
4. Only individuals who earn more than $86,500 are required to file a federal income tax return.	☐	☐
5. Average taxpayers contribute 15.3% of their income toward Social Security and Medicare taxes on an annual basis.	☐	☐
6. Money taken from a 529 savings plan is taxable in the year it is used to pay for tuition and books.	☐	☐
7. Those living in the United States pay the most taxes of any country.	☐	☐
8. While everyone must declare their income from jobs for tax purposes, those that earn money from tips and gratuities may exclude this income from taxation.	☐	☐
9. The highest-income individuals in the United States pay the least amount in federal taxes.	☐	☐
10. Money obtained from student loans is fully taxable.	☐	☐
Total:	____	____

How did you do? Add up the total number of true and false responses. It turns out that each of the statements is actually false! If you missed more than half of these questions, don't worry. This chapter will help you get up to speed on the U.S. tax system. If you did well on the questionnaire, you are well on your way to gaining an even stronger understanding of taxes.

Understanding Your Taxes

LO 4.1 Explain the purpose and types of taxes.

If you have ever had a job, you know that taxes are simply a part of life. **Taxes** are financial obligations imposed on individuals and businesses by government entities. Governments use taxes to:

- Build infrastructure.
- Provide social welfare.
- Pay for national defense.
- Provide other public services.
- Encourage economic activity.

Opinions on taxes vary widely. Some individuals view taxes as the price for having the opportunity to work and develop businesses in the United States. Others oppose taxes, such as Winston Churchill, who proclaimed, "There is no such thing as a good tax."

Regardless of your viewpoint, being knowledgeable about taxes will help you to plan your financial journey. To estimate your income accurately, you need to determine how much in taxes you will typically pay. In this topic, we discuss the taxes that most individuals pay and how these taxes affect income.

Types of Taxes

Most working adults will pay the following types of taxes:

- Federal income taxes.
- State income taxes (where applicable).
- Payroll taxes.
- Sales taxes.
- Property taxes.

Some taxes are paid just once or twice a year, such as property taxes. Other taxes are paid whenever a transaction occurs, such as sales taxes. Income and payroll taxes are paid throughout the year as income is earned. For example, consider Amy. She is a part-time college student, has a part-time job, and owns a car. Let's see the types of taxes that Amy pays on a regular basis.

Federal and State Income Taxes

Amy's job pays $12 per hour. She works 20 hours a week and gets paid every other week (40 hours per pay period). She just picked up her first paycheck and is looking forward to depositing her $480 of pay ($12 × 40 hours of work).

- When Amy looked at her check, she was shocked to see that it was much less than the $480 she was expecting.
- When she double-checked the pay stub accompanying her paycheck to verify that her hours were properly recorded, she then noticed all the withholdings from her gross pay. **Gross pay** is the total amount Amy earns before taxes and other deductions are considered.
- **Withholdings** are taken out of an employee's pay by the employer. Some withholdings are mandated by law, whereas other withholdings are elected by employees. Withholdings can include federal and state income taxes and payroll taxes, as well as employee benefits and charitable contributions (see **Helpful Hint**).

HELPFUL HINT

Federal income tax withholdings are determined on Form W-4, which an employee fills out with her or his employer.

As shown in **Illustration 4.1.1**, the total withholdings from Amy's paycheck were $68.72. Her net pay (gross pay minus withholdings) was only $411.28.

ILLUSTRATION 4.1.1

Amy's Pay Stub

Your Company Name	Your Company Address		EARNINGS STATEMENT
Amy Sample			# 0001
SSN	PAY PERIOD	PAY DATE	EMPLOYEE #
xxx-xx-1234	1/1/2020–1/15/2020	1/15/2020	120

INCOME	RATE	HOURS	CURRENT TOTAL	DEDUCTIONS	TOTAL	YTD TOTAL
GROSS EARNINGS	12	40	480	FICA – MEDICARE	6.96	6.96
				FICA – SOCIAL SECURITY	29.76	29.76
				FEDERAL TAX	17.00	17.00
				STATE TAX	15.00	15.00

YTD GROSS	YTD DEDUCTIONS	YTD NET PAY	TOTAL	DEDUCTIONS	NET PAY
480.00	68.72	411.28	480.00	68.72	411.28

Amy's employer withheld federal and state income taxes based on her completed Form W-4. This form allows an employee to increase or decrease the amount of federal and state income taxes withheld each pay period, to better match his or her tax liability at the end of the year. In Amy's case, she did not claim any allowances on her W-4. Not claiming any allowances resulted in having more money withheld from her pay for income taxes.

As this example illustrates, you need to be aware of how much will be withheld for taxes because this will have a direct impact on your take-home pay and whether you will owe more taxes at the end of the year. This, in turn, will affect how much income you will have each month to pay for daily household expenses and savings contributions. Most young people working part-time will not owe any income tax and could file as "exempt" on their W-4. Filing exempt will result in no income tax withheld from their paychecks.

Payroll Taxes

Amy had a second type of tax taken from her pay, the **Federal Insurance Contributions Act (FICA)** tax, which is used exclusively to pay for two government programs:

1. Social Security (FICA Old Age, Survivor, and Disability Insurance [OSADI]). This applies to earned income up to $128,400 (in 2018).
2. Medicare (FICA health insurance [HI]). This applies to all earned income.

Nearly every worker in the United States ends up paying FICA taxes (also known as *payroll taxes*). Generally, you can expect to pay 7.65% of your gross pay for Social Security and Medicare (see **Helpful Hint**). These taxes are discussed in greater detail in a later topic.

HELPFUL HINT

As with federal and state taxes, FICA taxes will affect your take-home pay and therefore your net income. You need to make sure your budget and financial plans accurately reflect this impact on your earnings.

Sales Taxes

During any given day, you are likely to pay another tax: sales taxes. Unlike payroll taxes, a sales tax is not deducted from your pay. Instead, **sales taxes** are imposed by state and local governments on the sale of certain goods and services. These taxes are paid when you buy something. Let's see how the sales tax affects Amy.

- After viewing her pay stub, Amy went out to lunch and ordered the $6.95 special.
- The cashier told her that the total cost would be $7.45.
- Amy realized that the extra 50 cents charged was sales tax.

Keep in mind that cities, counties, and states can all impose sales taxes. The amount of tax paid can differ dramatically from one location to another. A sales tax is determined based on two factors.

1. The **tax base** is the amount of money that will be taxed, which is generally based on the cost of the item you purchase.
2. The **tax rate** is used to calculate the amount of tax owed, which is generally denoted as a percentage rate, such as 7.5%.

The elements of the sales tax system are shown in **Illustration 4.1.2**. Multiplying the tax base by the tax rate will determine the amount of tax a consumer owes.

ILLUSTRATION 4.1.2

Sales Tax Formula

Tax Base × **Tax Rate** = **Tax**

For example, say you stop by the store and purchase a new shirt for $20.

- The shirt costs $20. This is your tax base.
- Also assume that the combined state and local sales tax rate in your town is 7.5%. This is the tax rate.
- As shown in **Illustration 4.1.3**, the sales tax that you will pay on your shirt is $1.50, which is calculated by multiplying $20 × 0.075.
- Your total purchase price for the shirt is therefore $21.50 (see **Helpful Hint**).

HELPFUL HINT

Sales taxes are an ongoing expense that will affect how much you can spend and save. For example, if you budget for the purchase of a new $500 washing machine and sales tax in your area is 7.5%, your total cost will actually be $537.50 [$500 + ($500 × 7.5%)].

ILLUSTRATION 4.1.3

Sales Tax Calculation

$20 × 7.50% = $1.50

Property Taxes

Let's catch up with Amy. After lunch, she had to renew her car registration at the local county motor vehicle registration office. After paying the fee to renew her car registration, she looked at the receipt and noticed that a significant portion of the fee was actually a property tax. A **property tax** is assessed based on the value of property that you own, such as your car or your home. Property taxes vary by state and are most often assessed by the city or county.

- Property taxes specifically imposed annually on the value of your vehicle are often referred to as **ad valorem taxes**, which means "according to value."
- The tax base for property taxes is the current assessed value of the property (which may be lower than the price you paid for the asset), as determined by the taxing authority.
- The tax rate is also determined by each taxing authority.
- Property tax rates for real estate vary significantly. In some locations, the property tax rate can be as high as 2.5%, while in other areas the rate is less than 0.5%!

Need for Taxes

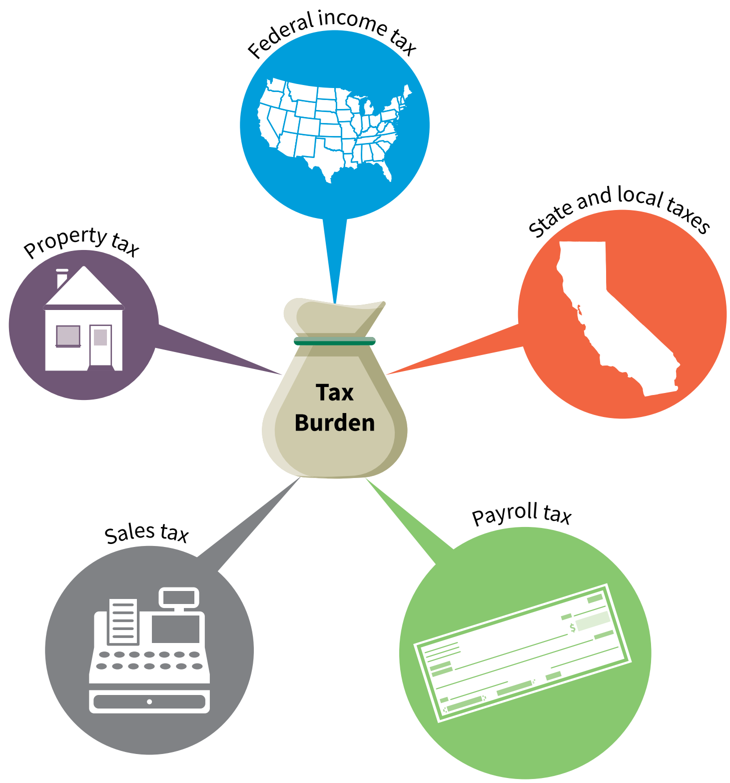
Considering her paycheck, lunch bill, and ad valorem tax on her car, Amy realized that she was paying a lot in taxes. These taxes, however, help to fund needed services in her community, such as the following:

- Her payroll taxes help to fund retirement benefits and health insurance for current retirees. Amy is also building credit in the Social Security system that can be used when she retires.
- The sales taxes paid help her local community pay for police and fire departments, schools, and public services.
- Her ad valorem taxes help to fund local roads, schools, and community improvements.

Illustration 4.1.4 shows the most common forms of tax that you are likely to encounter during your lifetime financial journey (the circle sizes are proportional to each tax's general impact on your financial situation). Again, keep in mind that state and local taxes can vary dramatically. You may want to consider this when moving or applying for jobs in other states or communities.

ILLUSTRATION 4.1.4

Common Types of Taxes Imposed by City, State, and Federal Governments



Concepts in Action

Jeff is "taxaphobic," meaning his goal is to avoid paying taxes. He believes that this will help him to maximize his wealth so that he can retire earlier. Jeff does household repair work for people in his community. He replaces kitchen cabinets, repairs roofs, installs appliances, and maintains yards. To hide his income from local, state, and federal governments, Jeff insists that his clients pay him in cash. Jeff also keeps most of the excess cash he earns in his apartment so that there won't be any bank records. Instead of investments, Jeff buys gold and other valuable items from pawn shops. Jeff also rents his apartment and drives an old car so that he will not have to pay property tax. Jeff is certainly minimizing his tax burden. Some of Jeff's strategies are very effective tax-avoidance strategies; however, some of his actions are illegal (such as not reporting his cash income to the Internal Revenue Service (IRS) and state). How are Jeff's aggressive tax-avoidance strategies affecting his financial future?

Solution

Jeff is missing out on many opportunities to safeguard and increase his wealth.

- By paying FICA taxes as an employee (or self-employment taxes), Jeff will be eligible to receive Social Security benefits when he retires or becomes disabled.
- Having his money in an insured bank account would be much safer. Currently, Jeff is exposed to the risk of theft, loss, or even a fire destroying his cash and valuables.
- The only investment Jeff is making is in gold, which is just one of many different assets that he could invest in over time. Jeff would benefit from owning a variety of assets, not just gold, to maximize his returns and minimize his risks.
- Property can appreciate in value over time, such as a house. By always renting to avoid property taxes, Jeff will not reap the benefits of appreciation in the value of a house.

- If Jeff would like to borrow money to buy a house or expand his business, it will be difficult to get a loan because most loans are based on income documented with a person's tax return. Jeff also can't apply for financial aid should he decide to go to college because a tax return is required.
- If Jeff wanted to hire employees to help him grow and expand his business, he would be limited to hiring only those employees who also want to cheat the tax system. This, of course, would greatly decrease (or eliminate) the number of qualified applicants he could hire.

Jeff may have minimized his tax burden, but he is not maximizing his after-tax wealth, making it harder to achieve his long-term financial goals.

Forms of Taxation

Throughout your lifetime, you can be confident that politicians will propose changing the form and structure of the U.S. tax system. (The most recent major tax law changes occurred at the end of 2017.) A **tax system** is simply a systematic and consistently applied method of determining how much tax an individual must pay. As shown in **Illustration 4.1.5**, there are three general forms of taxation.

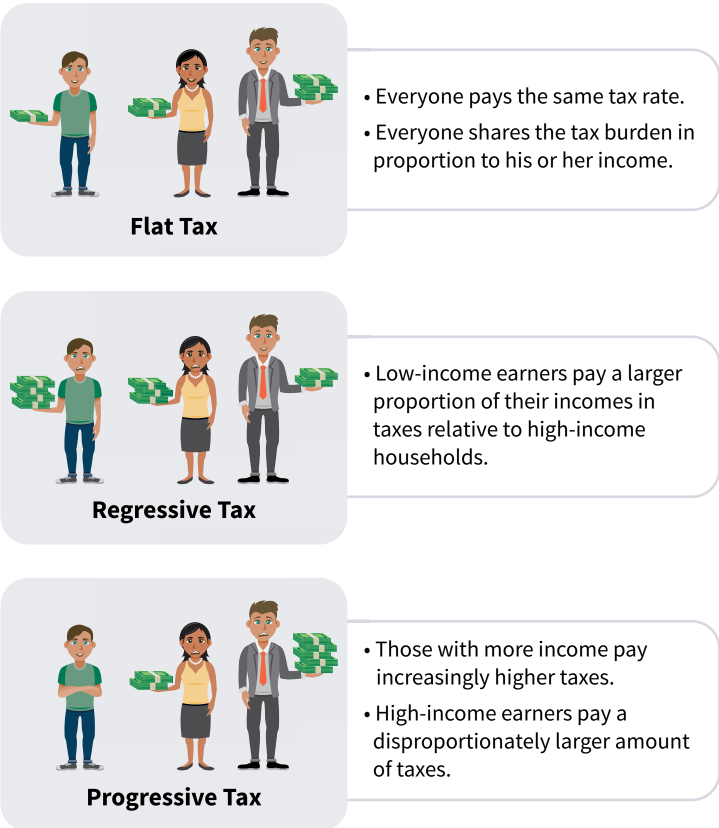


ILLUSTRATION 4.1.5

Three General Types of Tax Systems

Flat Taxes

Flat tax systems impose the same tax rate on all taxpayers subject to the tax.

- Typically, in flat tax systems, an individual's income is reduced by a set amount to calculate the individual's tax base. For example, the first $20,000 in income may be exempt from tax.
- This uniform reduction in income results in some taxpayers having a tax base of zero.

- Some countries, such as Russia, Ukraine, Estonia, and Latvia, have a flat tax system. Russia's flat tax rate is 13%, whereas Latvia's flat tax rate is 25%.

Regressive Taxes

Some taxes place a higher tax burden on low-income earners and a smaller relative burden on high-income earners. These taxes are called **regressive taxes**. A regressive tax causes:

- Lower-income individuals to pay a higher percentage of their income in taxes.
- The percentage of income paid in taxes to decrease as income rises.

HELPFUL HINT

Check your sales receipt next time you go grocery shopping. Many sales tax systems have a lower tax rate, or zero tax rate, on grocery-food purchases so they are less regressive in design.

Sales tax on food is an example of a regressive tax. If high-income and low-income households purchase the same amount of food and pay the same tax on that food, then a higher proportion of the low-income household's total income will be paid on food sales tax compared to the high-income household. However, some sales tax systems avoid being regressive by allowing large reductions in the tax base or by reducing the tax rate on certain items (see **Helpful Hint**).

Progressive Taxes

In contrast to regressive taxes, a **progressive tax** applies higher tax rates to higher-income households. The result is that as your income rises, a larger proportion of your income is being paid in taxes. This type of tax system aligns a taxpayer's ability to pay with the tax rate imposed, resulting in:

- High-income households having higher tax rates applied to their tax base.
- Lower-income households having lower tax rates applied to their tax base.

In a progressive tax system, tax rates are not constant and increase with income. In the United States, the lowest federal tax rate applied to taxable income is 10%, whereas the highest rate is 37%. In addition to progressive tax rates, tax credits (discussed in a later topic) further enhance the progressivity of the U.S. income tax system.

Taxes and the Government

If you had $650 billion, what would you do with it?

- You could buy every National Football League (NFL) team, all 32 of them.
- You could *also* buy every Major League Baseball (MLB) team, all 30 of them.
- You could *also* buy all 30 National Basketball Association (NBA) teams *and* all 30 National Hockey League (NHL) teams.
- Just for fun, you could *also* buy the top 20 world soccer teams.

After that spending spree, you would still have over $400 billion to spend. Note that $650 billion is also the approximate amount of the **annual U.S. federal deficit** ($665 billion in 2017).

Government Spending and Taxation

The **federal deficit** is the amount by which annual federal government expenditures exceed annual federal receipts, which are made up primarily of tax collections. If tax revenue exceeds annual expenditures, then there is a **federal surplus**.

- Federal deficits add to the U.S. debt, whereas federal surpluses decrease the U.S. debt.
- The **U.S. debt** is the amount of money the United States has borrowed and must repay.
- In 2018, total U.S. debt was more than $20 trillion.

Politicians often debate taxes and government spending because changing tax revenue or spending affects the size of the federal deficit (or surplus) and consequently the size of the federal debt. Thus, throughout your life, you will constantly hear discussions regarding taxes, spending, deficits, and debts (see **Helpful Hint**).

Options for how households should be taxed include the following:

- Predominantly high-income households should pay the most (progressive tax).
- Households should pay in proportion to their income (flat tax).
- Everyone should pay the same amount regardless of their income (regressive tax).

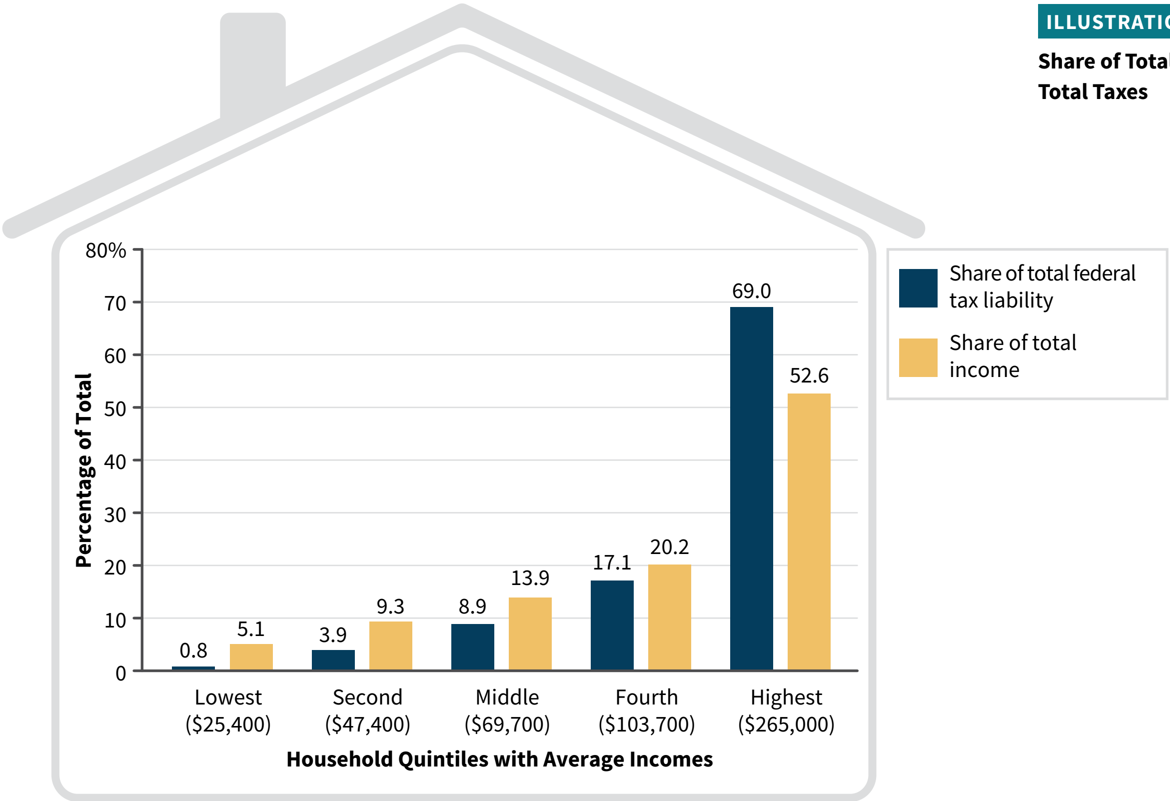
Illustration 4.1.6 shows the effects of the U.S. tax system. The highest-earning households (last two columns) earned about 53% of all income earned. These same households paid about 69% of the total federal tax bill as well. The lowest-earning households paid less than 1% of the total federal tax bill and earned about 5% of the total income. This is a progressive tax structure.

HELPFUL HINT

If you pay attention to policy debates, you will often find that the argument is not necessarily about the amount of taxes that should be paid or collected but rather about who should pay the tax. The answer will ultimately have a dramatic impact on your financial journey.

ILLUSTRATION 4.1.6

Share of Total Income and Total Taxes



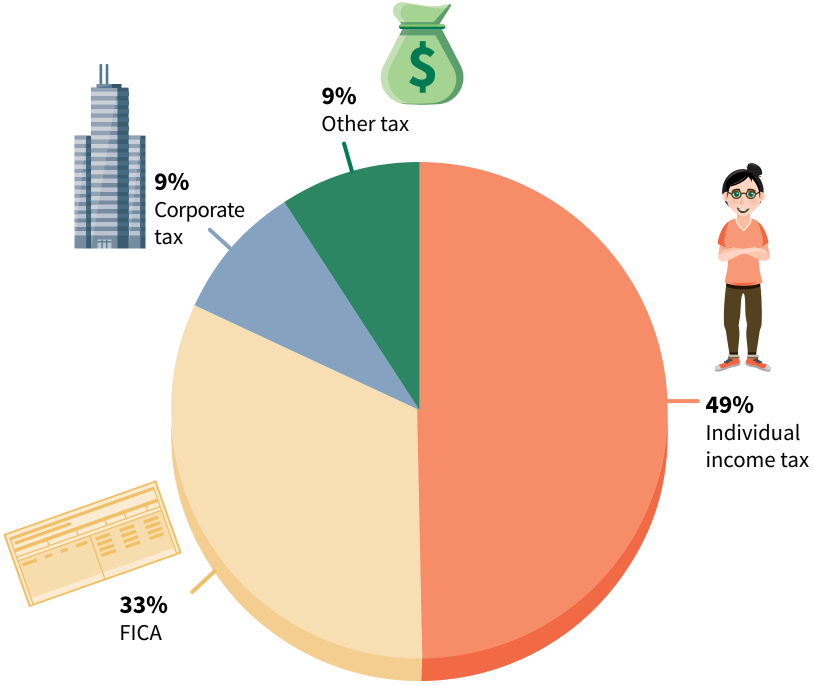
Source: Congressional Budget Office, *The Distribution of Household Income and Federal Taxes, 2013*. Retrieved from http://www.cbo.gov/publication/51361.

How does the United States compare to other countries?

- A recent study by the Organisation for Economic Co-operation and Development (OECD) found that the United States had the most progressive income tax system among industrialized nations.
- It turns out that in the United States, those with a higher income do pay more (and those with lower income pay less) of the total federal tax burden than in other industrialized countries.
- One thing that might surprise you about who pays the most in taxes in the United States is that individuals, not corporations, account for approximately 80% of all tax revenue collected by the federal government. This is shown in **Illustration 4.1.7**.

ILLUSTRATION 4.1.7

Breakdown of Federal Tax Revenue



Source: Office of Management and Budget, 2016.

As you continue to move forward with your own financial journey and reach more of your financial goals, your income and wealth will grow and so will your tax bill. As a result, you will benefit from learning simple ways to manage your taxes.

The Internal Revenue Service

The **Internal Revenue Service (IRS)** is a government agency within the U.S. Department of the Treasury that is charged with collecting taxes and enforcing tax laws passed by Congress. (Congress, through the legislative process, actually creates the federal tax law.) In the United States, taxes are collected as money is earned, which is why state and federal taxes are withheld from each paycheck. If you are self-employed, you have the responsibility to pay your taxes on a quarterly basis (every 3 months) throughout the year. Here is what you should know about the IRS.

- The IRS can impose many penalties on individuals who fail to comply with the law.
- The most common penalties are associated with the failure to file a tax return and the failure to pay a tax penalty.
- These penalties can add up to 25% of any tax owed.
- Additional penalties can be assessed for fraudulent tax reporting.
- If penalties are assessed, a taxpayer may also have to pay interest on the unpaid taxes, with interest accruing from the date the taxes were originally due.

Ultimately, the IRS can also seek criminal action against individuals who commit fraud, which can result in prison time. Most penalties are a result of honest mistakes, but the taxpayer still must pay the penalty (see **Helpful Hint**).

HELPFUL HINT

The IRS has up to 6 years to audit a tax return that has substantially understated tax liability. For smaller errors, the IRS can go back 3 years. In the case of fraud, there is no time limit.

End-of-Topic Assessment

Multiple-Choice Questions

1. The federal government uses tax revenue to:
   - **a.** build infrastructure.
   - **b.** provide social welfare.
   - **c.** pay for national defense.
   - **d.** build infrastructure, provide social welfare, and pay for national defense.

2. All of the following are types of tax systems, *except*:
   - **a.** sales tax.
   - **b.** property tax.
   - **c.** regressive tax.
   - **d.** FICA tax.

3. Which of the following taxes are most often paid through paycheck withholdings?

   I. FICA Old Age, Survivor, and Disability Insurance.

   II. Federal income tax.

   III. State income tax.
   - **a.** I only.
   - **b.** I and III only.
   - **c.** II and III only.
   - **d.** I, II, and III.

4. **Calculate** If you purchase a regularly priced $30 shirt on sale for only $10, what will the sales tax be if the sales tax rate in your community is 7%?
   - **a.** $2.10.
   - **b.** $1.40.
   - **c.** $0.70.
   - **d.** $0.00.

5. The basic tax formula is:
   - **a.** Tax Base × Tax Rate.
   - **b.** Income × Tax Rate.
   - **c.** Purchase Price × Tax Rate.
   - **d.** Wages × Tax Rate.

6. Which of the following statements is *true*?
   - **a.** Flat tax systems avoid being regressive by allowing a uniform reduction in the tax base.
   - **b.** The most regressive sales tax structures exempt food purchased at grocery stores from the tax base.
   - **c.** Ad valorem taxes are assessed regardless of the value of the property.
   - **d.** Progressive tax structures lead to progressively lower tax rates for high-income earners over time to stimulate the economy and promote growth.

7. Sales tax on food is commonly referred to as a:
   - **a.** pay-as-you-earn tax.
   - **b.** regressive tax.
   - **c.** progressive tax.
   - **d.** proportional tax.

8. If federal tax revenues are less than federal expenditures in a given year, then there is a federal __________ for that year.
   - **a.** debt
   - **b.** deficit
   - **c.** surplus
   - **d.** debt payoff

9. Much of the debate in Congress and in society about taxes focuses on:
   - **a.** who should pay taxes.
   - **b.** the total amount of tax revenue to be collected.
   - **c.** reducing the national debt.
   - **d.** whether individuals should pay taxes.

10. The United States uses a(n) __________ income tax system.
    - **a.** regressive
    - **b.** proportional
    - **c.** unfair
    - **d.** progressive

Adventures in Personal Finance

Short Answer

1. When you are an employee and get paid by your employer, taxes are automatically withheld from your paycheck. Some individuals are not paid as employees but rather as independent contractors, receiving a set price for doing the job. Or, their income may come in different forms, such as royalties on music or movies, in which case no taxes are withheld.
   - **a.** If no taxes are withheld when you get paid, do you still owe taxes?
   - **b.** When should those taxes be paid (assuming that you owe taxes)?

2. Is property tax, which generally uses a flat rate, a regressive or progressive tax system?

3. **Writing** Many countries have progressive income tax systems, some more so than others. Can a country's tax system be too progressive? Think about this question and write a paragraph arguing for or against a tax system being too progressive, including whether you believe the U.S. federal tax system should be more or less progressive.

Explore

1. Many rich and famous people have not always been accurate in reporting their taxable income to the IRS and paying their taxes. Do some online research and identify some of these people.
   - **a.** How much did the IRS say that they owed?
   - **b.** What was the end result of not paying their taxes?
   - **c.** Did any of these individuals go to jail?

2. Ad valorem taxes are levied based on the value of the property being taxed. Automobiles are often taxed this way on an annual basis, such that the more a car is worth, the more the owner will have to pay for it. Another way of assessing a tax on automobiles is based on the automobile's weight. Why would state and local governments assess taxes based on weight rather than value? Is either of these tax systems more progressive than the other? Does your state or local government assess a tax on automobiles? If so, what method does it use?

Expanded Learning Activity

Writing Although you might dislike the idea of taxes, think about what benefits you receive directly from the government. These benefits could include financial aid, such as Pell Grants and work-study programs. Direct government transfers to you may also include large tax refunds that exceed your withholding, such as the Earned Income Credit, Child Tax Credit, and American Opportunity Credit. You may also be getting health insurance through a government-supported program, such as Medicaid, or a subsidy to purchase health insurance through the Health Insurance Marketplace. As you complete school and begin your career, what might change regarding your current net taxpayer or recipient situation? Write a one-page reflection on your thoughts in response to this question.

Federal Income Tax Base

LO 4.2 Describe how to calculate taxable income.

Aysha and Cole are both full-time college students who work part-time. They each earned $8,000 this past year, and they each used student loans to pay tuition of $4,000. Because Aysha was claimed by her parents as a dependent, she owed nothing in taxes. On the other hand, because Cole was not claimed by his parents, not only did he not owe any taxes, he actually received a $1,000 refund. So, although Cole and Aysha's situations are similar, their tax status has resulted in significantly different outcomes.

Maximizing your after-tax wealth is important if your goal is to become financially successful. Can you completely avoid paying taxes on your journey to financial well-being? No. But you can legally reduce your taxes by finding ways to lower your tax base or tax rate. In this topic, we discuss how to calculate your tax base, as well as how to minimize it, for income tax purposes.

Overview of Federal Income Tax Returns

Nearly every adult must complete and file a federal income tax return each year before mid-April. A **tax return** is information that a taxpayer compiles and reports to the IRS on a standardized form. Sounds simple, right? Consider the form shown in **Illustration 4.2.1** (see **Helpful Hint**). For some, completing this form is simple. But for others, the tax-return process may seem very complicated.

HELPFUL HINT

The tax form you complete and file may look different from the one shown in Illustration 4.2.1, but many of the categories will probably be similar.

The Tax-Return Process

Employers, banks, investment companies, and businesses all report income and expense information about you to the IRS. When you send your tax return to the IRS, it is compared against this other information already submitted. If there are differences, the IRS may choose to contact you. Here's what you need to know about the tax-return process.

- You must file a federal income tax return if your income is above a certain level, which varies depending on your filing status, age, and the type of income you receive.
- Thus, if you have income and tax withholdings, it is important to file a tax return because it is more than likely the IRS already knows about your income.
- Even if you owe no tax and are not required to file a tax return, it is always an excellent idea to file a tax return because you can claim a refund for any taxes that were withheld from your paycheck.

In this topic, we will guide you through the filing process and identify planning strategies that will help to minimize your tax base or tax rate (see **Helpful Hint**). The first step is understanding the tax formula.

HELPFUL HINT

Knowing how income taxes work will empower you to be proactive in finding legal ways to minimize the taxes you must pay while maximizing your after-tax wealth. One of the best ways to gain this knowledge is by completing a tax form.

ILLUSTRATION 4.2.1 **Form 1040: U.S. Individual Tax Return**

Form **1040** Department of the Treasury—Internal Revenue Service (99)
U.S. Individual Income Tax Return OMB No. 1545-0074 IRS Use Only—Do not write or staple in this space. **Draft**

Filing status: ☐ Single ☐ Married filing jointly ☐ Married filing separately ☐ Head of household ☐ Qualifying widow(er)

Your first name and initial	Last name	**Your social security number**

Your standard deduction: ☐ Someone can claim you as a dependent ☐ You were born before January 2, 1954 ☐ You are blind

If joint return, spouse's first name and initial	Last name	**Spouse's social security number**

Spouse standard deduction: ☐ Someone can claim your spouse as a dependent ☐ Spouse was born before January 2, 1954 ☐ Full-year health care coverage or exempt (see inst.)
☐ Spouse is blind ☐ Spouse itemizes on a separate return or you were dual-status alien

Home address (number and street). If you have a P.O. box, see instructions.	Apt. no.	**Presidential Election Campaign** (see inst.) ☐ **You** ☐ **Spouse**
City, town or post office, state, and ZIP code. If you have a foreign address, attach Schedule 6.		If more than four dependents, see inst. and ✓ here ► ☐

Dependents (see instructions): **(1)** First name	Last name	**(2)** Social security number	**(3)** Relationship to you	**(4)** ✓ if qualifies for (see inst.): Child tax credit	Credit for other dependents
				☐	☐
				☐	☐
				☐	☐
				☐	☐

Sign Here
Joint return? See instructions. Keep a copy for your records.

Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Your signature	Date	Your occupation	If the IRS sent you an Identity Protection PIN, enter it here (see inst.)
Spouse's signature. If a joint return, **both** must sign.	Date	Spouse's occupation	If the IRS sent you an Identity Protection PIN, enter it here (see inst.)

Paid Preparer Use Only

Preparer's name	Preparer's signature	PTIN	Firm's EIN	Check if: ☐ 3rd Party Designee ☐ Self-employed
Firm's name ►		Phone no.		
Firm's address ►				

Attach Form(s) W-2. Also attach Form(s) W-2G and 1099-R if tax was withheld.

Line	Description		Line	Amount
1	Wages, salaries, tips, etc. Attach Form(s) W-2		1	
2a	Tax-exempt interest . . . 2a	b Taxable interest	2b	
3a	Qualified dividends . . . 3a	b Ordinary dividends	3b	
4a	IRAs, pensions, and annuities . 4a	b Taxable amount	4b	
5a	Social security benefits . . 5a	b Taxable amount	5b	
6	Total income. Add lines 1 through 5. Add any amount from Schedule 1, line 22		6	
7	Adjusted gross income. If you have no adjustments to income, enter the amount from line 6; otherwise, subtract Schedule 1, line 36, from line 6		7	
8	**Standard deduction or itemized deductions** (from Schedule A)		8	
9	Qualified business income deduction (see instructions)		9	
10	Taxable income. Subtract lines 8 and 9 from line 7. If zero or less, enter -0-		10	
11	**a** Tax (see inst) ____ (check if any from: **1** ☐ Form(s) 8814 **2** ☐ Form 4972 **3** ☐ ____)			
	b Add any amount from Schedule 2 and check here ► ☐		11	
12	**a** Child tax credit/credit for other dependents ____	**b Add** any amount from Schedule 3 and check here ► ☐	12	
13	Subtract line 12 from line 11. If zero or less, enter -0-		13	
14	Other taxes. Attach Schedule 4		14	
15	Total tax. Add lines 13 and 14		15	
16	Federal income tax withheld from Forms W-2 and 1099		16	
17	Refundable credits: **a** EIC (see inst.) ____ **b** Sch 8812 ____ **c** Form 8863 ____			
	Add any amount from Schedule 5 ____			
18	Add lines 16 and 17. These are your total payments		18	

Standard Deduction for—
- Single or married filing separately, $12,000
- Married filing jointly or Qualifying widow(er), $24,000
- Head of household, $18,000
- If you checked any box under Standard deduction, see instructions.

Refund

Direct deposit? See instructions.

Line	Description		Line	Amount
19	If line 18 is more than line 15, subtract line 15 from line 18. This is the amount you **overpaid**		19	
20a	Amount of line 19 you want **refunded to you.** If Form 8888 is attached, check here ► ☐		20a	
► b	Routing number	► **c** Type: ☐ Checking ☐ Savings		
► d	Account number			
21	Amount of line 19 you want **applied to your 2019 estimated tax** ►	21		

Amount You Owe

Line	Description		Line	Amount
22	**Amount you owe.** Subtract line 18 from line 15. For details on how to pay, see instructions ►		22	
23	Estimated tax penalty (see instructions) ►	23		

Form **1040**

Tax Formula

Illustration 4.2.2 shows the federal income tax formula that is captured in Form 1040.

- Once you calculate your tax base, you will likely need to use more than one tax rate to calculate your total taxes.
- Once you know the amount of your taxes, you may be able to reduce your tax liability (if any) by claiming a credit against the amount you owe.

ILLUSTRATION 4.2.2

Federal Income Tax Formula

	Gross income
—	**Deductions for adjusted gross income**
=	**Adjusted gross income**
—	**Deductions from adjusted gross income**
=	**Taxable income (tax base)**
×	**Tax rate(s) multiplied by taxable income**
=	**Assessed income tax**
+	**Other taxes and penalties**
—	**Credits and withholdings**
=	**Net tax due (or refund)**

Entering Personal Information

The first step when beginning to work on your taxes is to enter your personal information (i.e., name, address, and Social Security number). Next, you will need to determine your filing status and presence of dependents in your household.

Filing Status

Filing status is determined by your marital status and the presence of dependents. There are two categories of dependents: (1) qualifying children and (2) qualifying relatives. (We will discuss dependents in more detail in the next section.) The IRS uses five filing statuses, as shown in **Illustration 4.2.3** (see **Helpful Hint**).

HELPFUL HINT

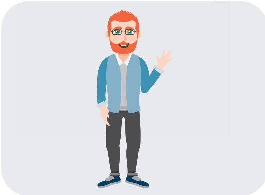
Your filing status affects both your tax base and the associated tax rates that apply to your tax base.

1. If you are unmarried and are not the primary provider for a dependent child, then your filing status is **single**.
2. If you are married, you can choose whether to file jointly or separately. Marital status is determined as of December 31. Generally, filing as **married filing jointly** results in a lower tax liability.
3. However, you may want to file **married filing separately** in some situations, like when one spouse has significant medical expenses or if the spouses do not want to combine their tax records.
4. If you are unmarried and you are the primary provider of a qualifying dependent, you should file as **head of household**.

5. If your spouse died within the past 3 years and you are continuing to care for dependent children, you may be able to file as a **qualifying widow(er) with dependent children**, depending on the circumstances. In the year of death, the filing status is either married filing jointly or married filing separately.

ILLUSTRATION 4.2.3

Five Filing Statuses



Single

- Not married.
- No dependent children or relatives.

Married Filing Jointly

- Must be legally married on the last day of the year (December 31).

Married Filing Separetely

- Must be legally married on the last day of the tax year and choose to file separately.

Head of Household

- Not married.
- Support at least one qualifying dependent.

Qualifying Widow(er)

- Spouse died within the three previous years and has not remarried.
- Support at least one qualifying child.
- In the year of death, surviving spouse files as married filing jointly or married filing separately.

Let's consider Jeff and Maria's situation.

- Jeff and Maria are both 24 years old and recently married (on December 21).
- Jeff earns $27,000 and Maria earns $35,000; they earned $125 in interest on their savings account for the year.
- They have no children or other dependents.

Even though they were married near the end of the year, Jeff and Maria's filing status can be either married filing jointly or married filing separately. In their case, Jeff and Maria have decided to file a joint tax return.

Jeff and Maria use Form 1040 to file their tax return. Although Jeff and Maria may use free tax-preparation software to prepare their tax return, the underlying form that they are using is still Form 1040. You can see Jeff and Maria's tax return in **Illustration 4.2.4**.

Dependents

If a taxpayer is providing a home for another person, then the taxpayer may be able to claim the other person as a dependent on his or her tax return. Claiming a dependent may entitle a taxpayer to preferential filing status (head of household) and other tax benefits (some of which will be discussed later). On the other hand, if you are claimed as a dependent by someone else, you may lose certain tax benefits (these go to the person who claims you).

ILLUSTRATION 4.2.4 **Form 1040 for Jeff and Maria**

Form **1040** Department of the Treasury—Internal Revenue Service (99)
U.S. Individual Income Tax Return OMB No. 1545-0074 IRS Use Only—Do not write or staple in this space. **Draft**

Filing status: ☐ Single ☑ Married filing jointly ☐ Married filing separately ☐ Head of household ☐ Qualifying widow(er)

Your first name and initial	Last name	Your social security number
Jeff	Sample	0 0 0 0 0 0 1 2 3

Your standard deduction: ☐ Someone can claim you as a dependent ☐ You were born before January 2, 1954 ☐ You are blind

If joint return, spouse's first name and initial	Last name	Spouse's social security number
Maria	Sample	0 0 0 0 0 0 9 9 4

Spouse standard deduction: ☐ Someone can claim your spouse as a dependent ☐ Spouse was born before January 2, 1954 ☑ Full-year health care coverage or exempt (see inst.)
☐ Spouse is blind ☐ Spouse itemizes on a separate return or you were dual-status alien

Home address (number and street). If you have a P.O. box, see instructions. Apt. no.
1234 South Street
Presidential Election Campaign (see inst.) ☐ You ☐ Spouse

City, town or post office, state, and ZIP code. If you have a foreign address, attach Schedule 6.
Anytown, GA 30000
If more than four dependents, see inst. and ✓ here ▶ ☐

Dependents (see instructions): (1) First name / Last name	(2) Social security number	(3) Relationship to you	(4) ✓ if qualifies for (see inst.): Child tax credit	Credit for other dependents
			☐	☐
			☐	☐
			☐	☐
			☐	☐

Sign Here
Under penalties of perjury, I declare that I have examined this return and accompanying schedules and statements, and to the best of my knowledge and belief, they are true, correct, and complete. Declaration of preparer (other than taxpayer) is based on all information of which preparer has any knowledge.

Joint return? See instructions. Keep a copy for your records.

Your signature	Date	Your occupation	If the IRS sent you an Identity Protection PIN, enter it here (see inst.)
Jeff Sample	1/31/2021	Writer	
Spouse's signature. If a joint return, **both** must sign.	Date	Spouse's occupation	If the IRS sent you an Identity Protection PIN, enter it here (see inst.)
Maria Sample		Lab Assistant	

Paid Preparer Use Only
Preparer's name | Preparer's signature | PTIN | Firm's EIN | Check if: ☐ 3rd Party Designee ☐ Self-employed
Firm's name ▶ | Phone no.
Firm's address ▶

Attach Form(s) W-2. Also attach Form(s) W-2G and 1099-R if tax was withheld.

Line	Description	Line	Amount	Cents
1	Wages, salaries, tips, etc. Attach Form(s) W-2	1	62,000	00
2a	Tax-exempt interest . . . 2a ___ b Taxable interest	2b	125	00
3a	Qualified dividends . . . 3a ___ b Ordinary dividends	3b		
4a	IRAs, pensions, and annuities . 4a ___ b Taxable amount	4b		
5a	Social security benefits . . 5a ___ b Taxable amount	5b		
6	Total income. Add lines 1 through 5. Add any amount from Schedule 1, line 22	6		
7	Adjusted gross income. If you have no adjustments to income, enter the amount from line 6; otherwise, subtract Schedule 1, line 36, from line 6	7	62,125	00
8	**Standard deduction or itemized deductions** (from Schedule A)	8	24,000	00
9	Qualified business income deduction (see instructions)	9		
10	Taxable income. Subtract lines 8 and 9 from line 7. If zero or less, enter -0-	10	38,125	00
11	a Tax (see inst) ___ (check if any from: 1 ☐ Form(s) 8814 2 ☐ Form 4972 3 ☐ ___) b **Add** any amount from Schedule 2 and check here ▶ ☐	11	4,194	00
12	a Child tax credit/credit for other dependents ___ b **Add** any amount from Schedule 3 and check here ▶ ☐	12		
13	Subtract line 12 from line 11. If zero or less, enter -0-	13	4,194	00
14	Other taxes. Attach Schedule 4	14		
15	Total tax. Add lines 13 and 14	15	4,194	00
16	Federal income tax withheld from Forms W-2 and 1099	16	5,300	00
17	Refundable credits: a EIC (see inst.) ___ b Sch 8812 ___ c Form 8863 ___ **Add** any amount from Schedule 5 ___			
18	Add lines 16 and 17. These are your total payments	18	5,300	00
19	If line 18 is more than line 15, subtract line 15 from line 18. This is the amount you **overpaid**	19	1,106	00
20a	Amount of line 19 you want **refunded to you.** If Form 8888 is attached, check here ▶ ☐	20a	1,106	00
b	Routing number ___ ▶ c Type: ☐ Checking ☐ Savings			
d	Account number ___			
21	Amount of line 19 you want **applied to your 2019 estimated tax** ▶ 21 ___			
22	**Amount you owe.** Subtract line 18 from line 15. For details on how to pay, see instructions ▶	22		
23	Estimated tax penalty (see instructions) ▶ 23 ___			

Standard Deduction for—
- Single or married filing separately, $12,000
- Married filing jointly or Qualifying widow(er), $24,000
- Head of household, $18,000
- If you checked any box under Standard deduction, see instructions.

Refund (lines 19–21). Direct deposit? See instructions.

Amount You Owe (lines 22–23)

Form **1040**

Although the definition of a tax dependent can get complicated, there are two basic categories of dependents: children and relatives. The most common type of dependent is a child. **Qualifying children** are considered dependents of the taxpayer. Qualifying children must pass four general tests: support, age, relationship, and abode. These are outlined in **Illustration 4.2.5**.

ILLUSTRATION 4.2.5

Requirements to Be a Qualifying Child

Support	• The child did not provide more than half of his or her own support during the tax year.
Age	• At the end of the tax year, the child was: ♦ Younger than 19 and younger than the taxpayer. OR ♦ A full-time student, younger than 24, and younger than the taxpayer.
Relationship	• Taxpayer's child, adopted child, stepchild, foster child, or his or her descendant. OR • Taxpayer's sibling, half-sibling, step-sibling, or descendant of any of them.
Abode	• The child must live with the taxpayer for more than half the year, excluding temporary absences such as schooling, vacations, and illness.

Let's say that you take care of your mom, who currently lives with you. She certainly would not qualify as your child, but you might be able to claim her as a dependent on your tax return as a qualifying relative (and therefore also be able to choose head of household filing status). A **qualifying relative** is a dependent who meets all the following requirements:

- He or she is not a qualifying child of another person.
- His or her relationship to the taxpayer is that of child (as defined previously), parent, grandparent or direct ancestor, aunt, or uncle.
- The relative has less than $4,150 (in 2018) of gross taxable income.
- The taxpayer provides more than half the dependent's support.

One important exception to the relationship requirement is that if an unrelated person lives with you for the entire year, then she or he satisfies the relationship test.

As with all tax issues, certain guidelines apply.

- A taxpayer cannot claim a dependent if he or she is listed as a dependent on someone else's tax return.
- A dependent cannot be claimed on two different tax returns.

Calculating Total Income

Gross Income

The first step in figuring your income tax amount is to calculate your total income, also known as your **gross income**. Gross income is the sum of all your income, including the following.

- Wages and salary from work.
- Income from self-employment, partnerships, and so forth.
- Interest, dividends, capital gains, and rents.
- Scholarships and grants *in excess* of tuition and books.
- Unemployment benefits and bartering.
- Alimony received.
- Pensions and retirement plan distributions.

Some types of income are **excluded** from gross income and therefore they are not calculated in determining the tax base, as shown in **Illustration 4.2.6**. If you plan ahead, you can structure some of your financial endeavors in such a way as to produce income that is excluded from gross income, such as selling your personal residence, earning a scholarship for tuition/fees/books, or having your employer pay for your tuition.

ILLUSTRATION 4.2.6

Items Excluded from Gross Income

- Loan proceeds.
- Gifts and inheritances.
- Scholarships (educational assistance) used for tuition, fees, and required books and supplies.
- Capital gain on sale of primary residence (up to $250,000 for those who are single and $500,000 for those who are married).
- Life insurance death benefits.
- Fringe benefits through employment, such as health insurance premiums.
- Qualifying distributions from Roth IRAs.
- A portion of, or all, Social Security benefits.
- Municipal bond interest.

Let's see how this might work in practice. Assume that Jeff and Maria have both returned to college on a full-time basis and now work part-time. Here is their current situation:

- Jeff earns $7,000 at his job, whereas Maria earns $19,000 at her job; their total earned income for the year is $26,000.
- Jeff and Maria received grants and scholarships to help offset college costs in the amount of $6,000.
- Because the total cost of their tuition and fees came to $9,000, Jeff and Maria borrowed $3,000 to pay the remaining costs.
- Jeff also received an additional $1,500 scholarship that was paid as cash to him. He used $500 of the scholarship to buy required books and the remaining $1,000 to pay rent.

The tax result is as follows.

- Jeff and Maria should report $26,000 of wages on their tax return.

- The $7,500 ($6,000 + $1,500) of grants and scholarships received is less than the tuition and fees paid and is therefore excluded from income and not reported anywhere on the tax return.
- The student loan of $3,000 is not income.

Determining Adjusted Gross Income

Throughout the year, you may also incur daily living expenses that you can use to reduce your gross income. These **deductions**, which are specific expenses allowed by Congress that can be used to offset gross income, will result in an **adjusted gross income (AGI)** amount that is reported on Form 1040. There are two types of deductions: (1) FOR AGI deductions which are used to calculate AGI and (2) FROM AGI deductions which reduce AGI further to calculate taxable income.

FOR AGI Deductions. Deductions used in the calculation of adjusted gross income (AGI) are commonly referred to as **FOR AGI deductions**.

HELPFUL HINT

A common FOR AGI deduction is interest paid on student loans. If you pay $160 in interest on your student loan, then you may be able to claim this FOR AGI deduction and your gross income will be reduced by $160.

- An important characteristic of FOR AGI deductions is that the first dollar of qualifying expenses immediately begins lowering your gross income and consequently your taxable income (see **Helpful Hint**).
- Deductions are generally capped, however.
- For example, if you paid $5,000 in student loan interest, you will only be able to deduct $2,500 (note that these amounts are subject to change; you can find updated amounts at the IRS website).

Many deductions are also only allowed if your income is below a certain amount. For example, if you are single, your AGI must be below $65,000 to be eligible to claim the maximum student loan interest deduction of $2,500. If your AGI is above $80,000, you cannot take any deduction for student loan interest because you are what the IRS calls "phased out" of claiming the deduction. Note that specific rules govern each deduction, and phase-out limits often change from one year to the next.

Additional examples of FOR AGI deductions include:

- Contributions to a Health Savings Account (contribution limit for a single individual is $3,450 in 2018).
- Contributions to a traditional IRA (contribution limit is $5,500) and contributions to other self-employed retirement plans.
- Health insurance premiums paid by self-employed individuals.

FROM AGI Deductions: Standard versus Itemized Deductions. **FROM AGI deductions** are not used to calculate AGI but do further reduce AGI. When claiming FROM AGI deductions, taxpayers can either claim the standard deduction (available to all taxpayers) or itemize their deductions.

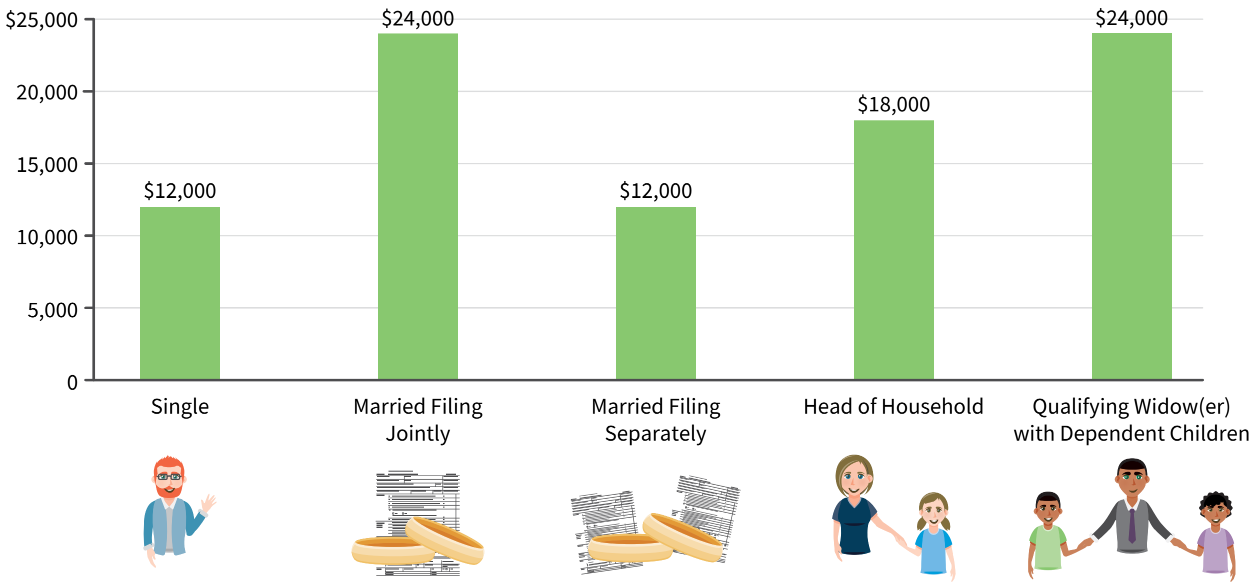
HELPFUL HINT

Your standard deduction is determined by your filing status. An additional standard deduction is available for those age 65 or older or blind.

You can claim the higher of your standard deduction or your itemized deductions. The **standard deduction** is an amount set by Congress and increases each year based on a modified measure of inflation (see **Helpful Hint**). Recent standard deduction amounts are shown in **Illustration 4.2.7**.

A special standard deduction exists for children claimed on their parents' tax return. The standard deduction for dependent children is equal to the greater of $1,050, or the sum of $350 plus the dependent child's earned income up to the standard deduction for single filing status ($12,000 in 2018).

ILLUSTRATION 4.2.7 **Standard Deduction Amounts for 2018**



Let's say that Vibha is attending City College, earns $4,000 working part-time, and is claimed as a dependent on her parents' tax return. Vibha's standard deduction when she files her own tax return will be the greater of $1,050 or $4,350 ($350 + $4,000, up to $12,000). In this situation, Vibha's standard deduction would be $4,350, which effectively eliminates Vibha's taxable income from earnings.

A taxpayer can also claim **itemized deductions**, which are specific expenditures that taxpayers can claim *instead* of the standard deduction. Common itemized deductions include the following.

- State and local taxes, including property and income tax (capped at $10,000).
- Out-of-pocket medical expenses that are more than 7.5% of the taxpayer's AGI (in 2018). In 2019, medical expenses must exceed 10% of AGI to be deductible.
- Interest paid on mortgage debt associated with your primary home (deductible interest limited to mortgage debt of $750,000 or less).
- Donations to charities.

Let's say Mary is single and donated $200 to a charity this year. Will this donation lower her taxes? If that is the only itemized deduction she has, then it will not lower her taxes because the standard deduction available to her is $12,000. Mary would be better off claiming the standard deduction of $12,000 rather than a $200 deduction. Remember, she cannot claim *both* the standard deduction and itemized deductions (see **Helpful Hint**).

HELPFUL HINT

You should always go with the deduction that provides the largest tax savings.

Let's revisit Jeff and Maria. Jeff and Maria do not have any FOR AGI deductions. Although it would be nice if they could start saving for retirement by contributing to an IRA, they simply don't have the extra funds to do that. They also only have minimal itemized deductions (they paid a total of $1,600 in state income taxes during the year). After doing the math, Jeff and Maria concluded that their standard deduction of $24,000 is much larger than their itemized deductions of $1,600, so they chose to use the standard deduction when filing their return. Most taxpayers claim the standard deduction because they do not have enough itemized deductions.

Congress has always allowed taxpayers to take deductions against income, but over the years these deductions have changed in nature and in size. Why? Because Congress often

uses federal tax policy, such as deductions, to encourage economic growth, promote income equality, influence social policy, and encourage taxpayers—like you—to take certain actions, such as:

- Investing in your human capital (education).
- Starting a business.
- Buying a home.
- Saving for your retirement.
- Maintaining your health.

HELPFUL HINT

If Congress has not specifically allowed the deduction, then you can't claim it on your tax return. If you are ever in doubt about what is or is not allowed, check the IRS website.

By allowing you to deduct expenses related to maintaining your health, improving your education, and buying a home, Congress is helping you to earn more money in the future. As you earn more money, the economy grows and the IRS collects more taxes. Additionally, as you save for your own retirement, your action reduces dependence on government programs such as Social Security and Medicaid (see **Helpful Hint**).

Taxable Income

Taxable income is the amount remaining after the standard deduction or itemized deductions. Taxable income is your tax base that will be used to determine your income tax. Your income does *not* equal your taxable income (tax base). As we have discussed, there are many exclusions and deductions that you can take to minimize your tax base while still enjoying your full income to achieve your goals.

After Jeff and Maria calculated their taxable income, they noticed that they received a lot of income during the year between wages and scholarships. However, after they used the standard deduction, their taxable income dropped to $0! They were excited about this because it means that they will not owe any taxes, and they may, in fact, get some money back.

Concepts in Action

Your friend Jorge learned that you are taking a personal finance course. He would like to get some ideas from you about how he can lower the amount of income tax he pays. Jorge is working full-time at a bank and earns $30,000 per year. Jorge paid $200 in student loan interest during the year. At the start of last year, he purchased a condo, for which he paid $4,000 in mortgage interest and $1,200 in property taxes. Jorge also paid $1,200 in state income taxes this year. Based on this information, what is Jorge's taxable income (tax base) for the year, and what can he do to lower that tax base further?

Solution

Jorge's filing status is single. Because his student loan interest of $200 is his only FOR AGI deduction, Jorge's AGI is $29,800 ($30,000 – $200). Jorge can claim the standard deduction of $12,000 for single individuals or he can itemize his deductions. Jorge has the following itemized deductions: mortgage interest $4,000 and state and local taxes $2,400 ($1,200 + $1,200), for a total of $6,400. This is less than the standard deduction, so Jorge should claim the standard deduction. Jorge's taxable income is therefore $17,800 ($29,800 – $12,000). This is Jorge's tax base.

Jorge could contribute money to an IRA or his employer's retirement savings plan to reduce his tax liability. Either of these contributions will be a FOR AGI deduction and will further reduce his tax base by the amount of the total contributions.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following entities also reports income that you earned to the IRS?
   - **a.** Employer.
   - **b.** Financial institutions.
   - **c.** Other entities that make substantial payments to you during the year.
   - **d.** Employers, financial institutions, and other entities that make substantial payments to you during the tax year.
2. You should file a tax return for the year if:
   - **I.** you have earned income.
   - **II.** your total income is greater than your standard deduction.
   - **III.** you earned more than $1,000.
     - **a.** I only.
     - **b.** I and III only.
     - **c.** II and III only.
     - **d.** I, II, and III.
3. If someone is married, which of the following filing statuses can they choose when filing their tax return?
   - **a.** Married filing jointly.
   - **b.** Married filing separately.
   - **c.** Head of household.
   - **d.** Either married filing jointly or married filing separately.
4. Terrance and Lori were married on December 31, 2020, as their way of celebrating New Year's Eve. Lori has a daughter from a prior relationship who lives with her. What filing status should they use when they file their tax returns for 2020?
   - **a.** They should file married filing jointly.
   - **b.** Lori should use head of household, and Terrance should use single.
   - **c.** Both should use head of household.
   - **d.** Both should use single.
5. If you are claimed as a dependent on someone else's tax return, which of the following statements is *correct*?
   - **a.** You can still receive the same tax benefits that you would if you were not a dependent.
   - **b.** You do not have to file a tax return.
   - **c.** You may lose certain tax benefits for yourself.
   - **d.** None of these answer choices is correct.
6. Which of the following items is included in gross income?
   - **a.** Scholarship income used for tuition, fees, and required books and supplies.
   - **b.** Gifts of $1,000 or more from parents or family members.
   - **c.** Student loan proceeds.
   - **d.** Interest earned on a savings account.
7. **Calculate** Michael is single, earns $90,000 a year, and paid $3,000 in student loan interest. How much of the student loan interest can Michael deduct on his tax return?
   - **a.** $3,000.
   - **b.** $2,500.
   - **c.** $500.
   - **d.** $0.
8. **Calculate** Sharina is single, is not claimed as a dependent, and has the following expenses: mortgage interest of $3,000, charitable contributions of $500, and state and local taxes of $2,000. What is the amount of Sharina's itemized or standard deduction that she can claim on her tax return? Choose the higher amount.
   - **a.** $12,000.
   - **b.** $6,400.
   - **c.** $5,500.
   - **d.** None of these answer choices is correct.
9. **Calculate** Swarn is single and has earned income of $5,000. Swarn is claimed by his parents as a dependent on their tax return. What is Swarn's standard deduction as a dependent child?
   - **a.** Standard deduction of $5,350.
   - **b.** Standard deduction of $1,050.
   - **c.** Standard deduction of $12,000.
   - **d.** Standard deduction of $5,000.
10. For federal income tax purposes, _________ is equal to the tax base.
    - **a.** gross income
    - **b.** adjusted gross income
    - **c.** taxable income
    - **d.** both adjusted gross income and taxable income

Adventures in Personal Finance

Short Answer

1. Which of the following items are *not* a FOR AGI deduction?
   - **a.** Contributions to an individual retirement account (IRA).
   - **b.** Contributions to a health savings account (HSA).

- **c.** Health insurance premiums for self-employed individuals.
- **d.** Mortgage interest.
- **e.** Property taxes.
- **f.** State income or sales tax.
- **g.** Student-loan interest deduction.

2. Explain why gross income and taxable income are different.

3. For each of the five filing statuses, provide an example of a person who would qualify. Which filing status will you use this year when you file your personal tax return?

4. Describe some of the reasons why it is a good idea to file a tax return if you have earned income, even if you do not owe any taxes.

Explore

1. The IRS has several ways of checking tax returns to make sure that taxpayers are reporting their taxable income. These include comparing the income reported on the tax return to the reported income paid to the taxpayer by employers, individuals, and financial institutions. Income payments made to individuals are reported to the individual and to the IRS on several different forms. Similarly, many legitimate deductions are reported to individuals on specific forms approved by the IRS. Match the following income and deduction items with their associated forms. (*Hint:* Use the IRS website to learn about these forms.)

a. Form W-2.	**1.** Income earned from dividends.
b. Form 1099-Div.	**2.** Deduction for mortgage interest paid.
c. Form 1099-R.	**3.** Income received as an employee.
d. Form 1098-T.	**4.** Income from interest earned.
e. Form 1099 Misc.	**5.** Income from retirement plan distributions.
f. Form 1098-Int.	**6.** Income earned as a self-employed person.
g. Form 1099-Int.	**7.** Income from scholarships and grants in excess of tuition and fees.

2. Visit the IRS website to learn about the Volunteer Income Tax Assistance (VITA) program or the Tax Counseling for the Elderly (TCE) program. Is there a VITA or TCE near where you live where you could receive help with your tax return or volunteer time to help others prepare taxes? Talk to others in class about volunteering for one of these services.

Expanded Learning Activity

Writing Go to the IRS website and open Form 1040 as a PDF. As you look at Form 1040, you will see the "Adjusted Gross Income" section. Some of these deductions can be grouped together in general categories, such as health, retirement, education, and employment. Write a two-page paper responding to the following questions: Who benefits the most from these expenditures? Why would Congress let individuals deduct these expenses to lower their tax base? What would you need to do to take advantage of any of these deductions?

Federal Income Tax Rates

LO 4.3 Describe how to calculate marginal and effective tax rates on income and capital assets.

Billionaire Warren Buffett recently stated that his federal effective tax rate is *lower* than his secretary's federal effective tax rate. How could a billionaire have a lower effective tax rate than his secretary if the United States has one of the most progressive income tax systems in the world?

Recall that the basic tax formula is the tax base multiplied by the tax rate. Calculating taxable income (the tax base for federal income taxes) is more involved than simply looking at your pay stub. In this topic, we continue the discussion of filing federal income taxes by describing how federal income tax rates are applied to the tax base (taxable income) and how that tax rate can be lowered through financial planning.

Federal Income Tax Brackets and Marginal Tax Rates

Income Tax Brackets

The U.S. tax system is based on a graduated system of tax brackets. These tax brackets and associated tax rates reflect the progressive nature of the federal income tax system.

- A **tax bracket** is a predefined range of taxable income in which a single tax rate applies.
- These tax brackets build on one another to create a continuous scale of seven different tax rates, ranging from 10% to 37%, that are applied in a progressive manner to calculate a taxpayer's income tax.
- **Illustration 4.3.1** shows the tax brackets for single taxpayers (in 2018). Each year's tax brackets are adjusted based on a modified measure of inflation. This means you can anticipate the numbers in the table to increase annually.

ILLUSTRATION 4.3.1 **Federal Tax Brackets and Associated Tax Rates for Single Filers**

If your taxable income is over	but not over	your tax is	of the amount over
$0	$9,525	10%	$0
$9,525	$38,700	$952.50 + 12%	$9,525
$38,700	$82,500	$4,453.50 + 22%	$38,700
$82,500	$157,500	$14,089.50 + 24%	$82,500
$157,500	$200,000	$32,089.50 + 32%	$157,500
$200,000	$500,000	$45,689.50 + 35%	$200,000
$500,000		$150,689.50 + 37%	$500,000

For example, say that you have a taxable income of $95,000 and are single. Using Illustration 4.3.1, you can calculate the tax on your $95,000 as follows.

1. Looking at the first two columns, note that your taxable income of $95,000 falls within the row of being over $82,500 but less than $157,500.

2. Moving to column three, you can see that the tax on your income is going to be $14,089.50 + [24% × ($95,000 – $82,500)] for a total tax of $17,089.50 ($14,089.50 + $3,000).
3. The $14,089.50 is the sum of the tax from the 10%, 12%, and 22% tax brackets, calculated as follows: (10% × $9,525) + [12% × ($38,700 – $9,525)] + [22% × ($82,500 – $38,700)]. Only the last $12,500 ($95,000 – $82,500) of income—the amount over $82,500—is taxed at 24%.

In this example, your highest **tax bracket tax rate** is 24%.

Marginal Tax Rate

The **marginal tax rate** is the rate of change in tax resulting from a change in income or deduction.

- If a taxpayer received one more dollar of income, how would that affect his or her tax?
- Similarly, if the taxpayer were able to claim one more dollar of deductions, how much tax savings would result?

When engaging in tax planning, knowing your marginal tax rate is helpful. **Illustration 4.3.2** shows the equation you can use to calculate your marginal tax rate.

ILLUSTRATION 4.3.2
Marginal Tax Rate Formula

$$\textbf{Marginal Tax Rate} = \left[\frac{\textbf{New Tax Liability} - \textbf{Old Tax Liability}}{\textbf{New Income} - \textbf{Old Income}}\right]$$

To calculate the marginal tax rate, you will need to know:

- The new tax liability after the change in income.
- The old tax liability before the change in income.
- The change in income.

For example, assume that your income increased $2,000. If the difference between your new tax liability and old tax liability is $500, you would know that your marginal tax rate is 25% ($500 ÷ $2,000).

In practice, most people simply use their highest tax bracket tax rate from Illustration 4.3.1. For example, if your taxable income is $95,000 and you earn one more dollar, the highest tax bracket rate that will apply to that dollar is 24%. Think of it this way: for every $1 more you make, 24 cents will go toward taxes. Similarly, for each extra $1 tax deduction, you will save 24 cents in taxes.

What happens to the tax brackets if your filing status changes from single to married? The same tax rates apply, but the tax brackets are larger so that more of your household income is taxed at lower tax rates. **Illustration 4.3.3** shows tax brackets for married taxpayers filing jointly (for 2018).

ILLUSTRATION 4.3.3 **Federal Tax Brackets and Associated Tax Rates for Married Filing Jointly**

If your taxable income is over	but not over	your tax is	of the amount over
$0	$19,050	10%	$0
$19,050	$77,400	$1,905 + 12%	$19,050
$77,400	$165,000	$8,907 + 22%	$77,400
$165,000	$315,000	$28,179 + 24%	$165,000
$315,000	$400,000	$64,179 + 32%	$315,000
$400,000	$600,000	$91,379 + 35%	$400,000
$600,000		$161,379 + 37%	$600,000

Let's run through an example.

- Assume that you are married and both you and your spouse are employed. Together, your combined taxable income is $95,000 per year (see **Helpful Hint**).
- Following the same steps as earlier, your tax would be $12,799, calculated as (10% × $19,050) + [12% × ($77,400 – $19,050)] + [22% × ($95,000 – $77,400)].
- As a married couple, you will pay $4,290.50 less in taxes on the same taxable income than if you filed as a single person ($17,089.50 – $12,799) because the tax brackets are larger. Therefore, more of a married-filing-jointly taxpayers' income is being taxed at lower rates. In fact, in this example, a married-filing-jointly taxpayer's highest tax bracket tax rate is 22%, whereas a single taxpayer's highest tax bracket tax rate is 24%.

HELPFUL HINT

The tax for married filing jointly is the same even if only one spouse is employed.

As you can see, filing status has a big impact on the tax rates and ultimately the tax that a household pays.

Illustration 4.3.4 presents a new example comparing married-filing-jointly and single taxpayers. This example incorporates the higher standard deductions that married-filing-jointly taxpayers receive. You may be a little frustrated that something as simple as the filing status can have such a substantial impact on your tax base and tax rate. But before you rush off to the wedding chapel for the sake of tax avoidance, remember that there are many good reasons to get married, but tax savings should not be a determining factor!

ILLUSTRATION 4.3.4

Comparison of Single and Married Taxpayers

	Married Filing Jointly	Single
Gross income	$75,000	$75,000
FOR AGI deductions	$0	$0
AGI	$75,000	$75,000
Standard deduction	$24,000	$12,000
Taxable income	$51,000	$63,000
Tax	$5,739	$9,799.50

Tax Rate on Unearned Income of Minors

In certain situations, like when a parent or guardian has saved money for a child's education or wedding, or for a child's financial benefit later in life, the child (minor) may have significant unearned income from interest, dividends, and capital gains on that money. Congress has imposed what is commonly referred to as the **kiddie tax** on dependent children with more than $2,100 (in 2018) of unearned income, such as interest and dividends (see **Helpful Hint**).

HELPFUL HINT

The actual calculation of the kiddie tax is outside the scope of this discussion, but it is good to be aware of and learn more about this tax if it might apply to your situation now or in the future.

- The kiddie tax applies to dependent children until the year they reach age 25.
- The tax ensures that a child's *excess* unearned income will be taxed at a higher tax rate.

Capital Assets and Tax Rates

The federal income tax rates that we have discussed thus far apply to **ordinary income**, or income derived from work, interest, self-employment, retirement plan distributions, rents, royalties, and other sources of earned income. **Capital gain income** is included in gross income, but a different tax rate applies to long-term capital gains and qualified dividends. Before we discuss the tax rates on capital gains, however, let's first discuss how capital gains are produced.

Capital Assets

Capital gains are produced by owning capital assets. **Capital assets** are things that you own for investment or personal use, either tangible or intangible, such as stocks, mutual funds, coin collections, other investments, personal belongings, cars, and real estate. Capital assets are defined by the IRS by what they are *not*.

- They are *not* used in your business (such as a tablet or a car).
- They are *not* a result of your normal business activities (like accounts receivable at a business).
- They are *not* associated with creative works (e.g., copyrights of songs and movies) of the people who created them.

Here are three important rules to remember about these assets.

1. If you were to sell any of these items for more than you paid for them, you would have a taxable capital gain. If you owned the items for more than a year, then long-term capital gains tax rates (discussed in the next section) would apply.
2. If you sold a personal-use item for less than you paid for it, could you deduct it as a capital loss on your tax return? No. Unfortunately, you cannot report a loss on personal use items; you can only report the gain.
3. A special category of long-term capital assets called *collectibles* is taxed at 28%. Collectibles include items like artwork, stamps, coins, and antiques.

If you sell an investment instead of a personal item for a loss (i.e., less than you purchased it for), you may be able to deduct some or all of the loss from your taxable income.

Long-Term Capital Gains Tax Rates

Long-term capital gains are produced by selling assets (such as real estate or stock) that you have owned for more than 1 year for a profit. As **Illustration 4.3.5** shows, these gains (in 2018) are most commonly taxed at 0% or 15%, with an exception for higher-income households.

- If you have a $1,000 long-term capital gain from selling an investment and you are single with taxable income of $35,000, your tax rate on the capital gain will be 0%!
- If you are single and your taxable income is between $38,600 and $425,800, then your tax rate on long-term capital gains will be 15%.
- If you are single and your taxable income is above $425,800, then your long-term capital gains tax rate will be 20%. For example, your tax on a $1,000 gain will be $200.

ILLUSTRATION 4.3.5 **Long-Term Capital Gains Tax Rates**

Income by Filing Status			
Married Filing Jointly	**Head of Household**	**Single**	**Long-Term Capital Gain Tax Rate**
$0–$77,200	$0–$51,700	$0–$38,600	0%
$77,200–$479,000	$51,700–$452,400	$38,600–$425,800	15%
Over $479,000	Over $452,400	Over $425,800	20%

If you could have all your income taxed at the lower capital gains tax rates, you would be able to accumulate after-tax wealth faster and reach your financial life goals quicker. Recall that billionaire Warren Buffett has an effective tax rate that is *lower* than his secretary. The reason is because most of Buffett's income is taxed at long-term capital gains tax rates, which is a result of owning capital assets.

Short-Term Capital Gains

Short-term capital gains result from selling a capital asset at a gain, but the asset is owned for one year or less. Short-term capital gains are taxed as ordinary income and do not receive any special tax treatment.

Capital Losses

Unfortunately, you may not always sell investments for a gain. Hopefully, though, only on rare occasions will you sell an asset for less than you paid for it and create a capital loss. Capital losses first offset any similar capital gains that you have. After that, $3,000 of capital losses can be reported on your tax return, which can reduce your tax base.

Concepts in Action

Tiffany is single and has been busy over the past couple of years working and investing. This year, she earned $35,000 in wages. She also sold an investment that she had owned for 2 years, which resulted in a long-term capital gain of $3,000. If Tiffany takes a standard deduction ($12,000), what is her tax on this income for the year?

Solution

Tiffany's gross income is $38,000, and her standard deduction is $12,000. Tiffany's total taxable income is therefore $26,000 ($38,000 – $12,000). But part of this taxable income is a long-term capital gain of $3,000. Tiffany's taxable income is less than $38,600 so the tax rate on her long-term capital gain is 0%. Thus, Tiffany's income subject to ordinary tax rates is only $23,000 ($26,000 – $3,000). Her tax is $2,569.50 (tax on $23,000 using Illustration 4.3.1). Tiffany really has two tax bases and two sets of tax rates. One applies to her long-term capital gain and the other applies to her ordinary income.

Effective Tax Rates

In contrast to the tax bracket tax rate or the marginal tax rate discussed previously, the **effective tax rate** measures the average tax an individual pays on his or her entire income. The calculation for the effective tax rate is shown in **Illustration 4.3.6**.

$$\text{Effective Tax Rate} = \left[\frac{\text{Total Federal Taxes}}{\text{Taxpayer's Total Income}}\right] \times 100$$

ILLUSTRATION 4.3.6

Effective Tax Rate Formula

Consider again the example in Illustration 4.3.4 in which both households have gross income of $75,000 (see **Helpful Hint**).

- The married-filing-jointly taxpayer has tax of $5,739, resulting in an effective tax rate of 7.7% [($5,739 ÷ $75,000) × 100].
- The single taxpayer's tax is $9,799.50, resulting in an effective tax rate of 13.1% [($9,799.50 ÷ $75,000) × 100].

HELPFUL HINT

A taxpayer's effective tax rate will always be less than the taxpayer's marginal tax rate and tax bracket tax rate because of the progressive structure of the U.S. tax code.

The favorable taxation of long-term capital gains was highlighted in the 2012 U.S. presidential election when President Barack Obama was running against Governor Mitt Romney. Both candidates released their prior year tax returns as follows.

- Barack and Michelle Obama had an AGI of $789,674 and paid taxes of $162,074, resulting in an effective tax rate of 20.5%. All the Obamas' income was made up of ordinary income, and the ordinary income tax rates applied.
- Mitt and Ann Romney reported an AGI of $13,696,951 and paid federal income taxes of $1,935,708, resulting in an effective tax rate of only 14.1%. Because the majority of the Romneys' income was long-term capital gains, they realized a much lower effective tax rate on their income. Notice that the Romneys paid much more tax than the Obamas, but their overall effective tax rate was lower.

As this real-life example illustrates, you can plan and structure your future income in ways that can lower your effective tax rate.

End-of-Topic Assessment

Multiple-Choice Questions

1. A progressive tax system makes higher-income individuals pay a(n) _________ share of the overall tax burden.

a. larger
b. equal
c. smaller
d. 1%

2. The highest federal marginal income tax bracket rate on earned income in the United States is:

a. 25%.
b. 37%.
c. 39.6%.
d. 50%.

3. **Calculate** John is single and has taxable income of $25,000. What is his tax?

a. $2,809.50.
b. $2,041.50.
c. $3,000.00.
d. $3,750.00.

4. **Calculate** Maria is single and has taxable income of $12,000. What is the tax on her taxable income?

a. $0.
b. $933.00.
c. $1,249.50.
d. $1,800.00.

5. Sam has taxable income of $350,000. Sam's nephew Adam has taxable income of $3,500. What federal income tax rate applies to the first taxable dollar of Sam's taxable income and what tax rate applies to the first taxable dollar of Adam's taxable income?

a. 0% and 0%.
b. 0% and 10%.
c. 10% and 10%.
d. 10% and 37%.

6. **Calculate** Marla is considering a new job where she would earn $5,000 more per year. With her current job and situation, her tax is $4,900. With her new pay raise, her taxes would increase to $6,100. What is Marla's marginal tax rate?

a. 10%.
b. 15%.
c. 24%.
d. 28%.

7. The maximum long-term capital gain tax rate that applies to a single individual with total taxable income less than $30,000 is:

a. 0%.
b. 5%.
c. 10%.
d. 15%.

8. **Calculate** Eric recently sold an investment for $1,000. He purchased the investment for $500 two years ago. Eric is single and has total taxable income of $25,000. What is Eric's tax on the gain on his investment?

a. $0.
b. $50.
c. $75.
d. $150.

9. Susan's marginal tax rate is 18%. Susan's effective tax rate is:

a. higher.
b. lower.
c. the same.
d. There is not enough information to solve the problem.

10. **Calculate** Xavier has gross income of $50,000 after deductions and other exclusions. Xavier has taxable income of $35,000 and paid taxes of $4,786. What is Xavier's effective tax rate?

a. 9.6%.
b. 13.7%.
c. 15.0%.
d. None of the answer choices is correct.

Adventures in Personal Finance

Short Answer

1. **Calculate** Paxton and Jimaria are married and file a joint tax return. Together, their taxable income is $100,000. How much will they pay in taxes?

2. **Calculate** Thomas is single and has taxable income of $100,000. How much will he pay in taxes?

3. Compare your calculations from Short Answers 1 and 2. What is the difference in the amount that each household pays in taxes on the same taxable income? What is causing the difference?

Explore

1. Individuals with a filing status of head of household also have a distinct set of tax brackets. Go to the IRS website to find the head-of-household tax brackets. Compare these brackets to those of single and married-filing-jointly taxpayers. What are the differences and similarities?

2. In addition to the federal income tax, many states have their own income tax systems. However, some states do not have any income tax; rather, they raise tax revenue in different ways. Find out the highest tax rate on income in the state in which you currently live. Now look at a state that you might want to move to after you graduate from school, find the highest tax rate on income in that state, and then compare the two numbers. Are they different? Is your desire to move to the new state affected by that state's tax rates?

Expanded Learning Activity

Based on your estimated annual income and standard deduction, what is your taxable income and what is your marginal tax rate? Now think forward to when you plan to graduate and start working in your chosen career path. How much do you realistically expect to earn annually? Use this higher earnings number to estimate your tax after graduation (use the 2018 standard deduction and tax bracket amounts to estimate this). How will your tax situation differ?

Federal Income Tax Credits

LO 4.4 Discuss how federal income tax credits for education, health insurance, and households with children can help to lower income taxes.

It may be hard to believe, but the tax system can help you during your lifetime financial journey. For example, imagine that you are going to school and working part- or full-time at a job to pay for your tuition, fees, and books. Then imagine someone said, “Hey, you are a hard-working individual—you deserve a bonus of $1,000.” Wouldn’t that be nice? The truth is that under the current tax law, the federal government sometimes does just this for students in their first 4 years of college. It comes in the form of a refundable tax credit. In this topic, we discuss how federal income tax credits can lower your tax bill and sometimes increase your cash flow.

Understanding Tax Credits

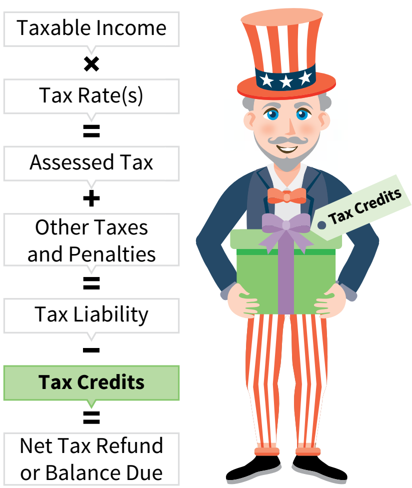
Would you file a tax return if you knew that you would receive more money back (in the form of a tax refund) than what you had paid in taxes all year? For some people, that is exactly what happens. Although none of the tax brackets have a negative tax rate, negative effective tax rates do occur.

Negative Effective Tax Rates

Negative effective tax rates result when refundable tax credits exceed an individual’s total tax. A **tax credit** is a dollar-for-dollar reduction in an assessed tax liability. When a tax credit is refundable, it is possible for a taxpayer to get back more money than he or she paid in taxes. Essentially, a negative effective tax rate works out as a benefit to the taxpayer. **Illustration 4.4.1** shows how tax credits work to reduce a person’s tax liability.

ILLUSTRATION 4.4.1

Tax Credits Work to Reduce Assessed and Other Taxes



One way to think of negative effective tax rates is as a government transfer. Some characteristics of taxpayers with negative effective tax rates are as follows.

- Negative effective tax rates are most prevalent among low-income working households with dependent children and undergraduate college students.

- Recently, the first quintile of all households ranked by income had an average effective federal income tax rate of –9.2%.
- The next 20% of households had an average effective income tax rate of –2.3%.

This means that these households (approximately 40% of all households), on average, did not owe any federal income taxes but rather were *paid* to file their federal tax return.

Value of Tax Credits

As noted previously, tax credits reduce a tax filer's assessed income tax dollar for dollar. What this means is that a $1,000 tax credit is more valuable than a $1,000 deduction.

- The tax savings from the tax credit is $1,000.
- The tax savings from the deduction is equal to $1,000 multiplied by the marginal tax rate. As such, the resulting tax savings will always be less than $1,000.

Illustration 4.4.2 compares a $1,000 FOR AGI deduction and a $1,000 refundable tax credit for a single taxpayer with income of $20,000. As shown, the difference is that the $1,000 tax credit results in a $200 tax refund, whereas the $1,000 FOR AGI deduction simply reduces taxable income (the taxpayer still owes $700 in tax).

ILLUSTRATION 4.4.2

Comparison of Tax Deduction and Refundable Tax Credit

	Example of $1,000 FOR AGI Deduction	Example of $1,000 Refundable Credit
Gross income	$20,000	$20,000
Deduction FOR AGI	– 1,000	– 0
AGI	$19,000	$20,000
Standard deduction	– 12,000	– 12,000
Taxable income	$7,000	$8,000
Tax rate (10% bracket)	× 10%	× 10%
Tax	$700	$800
Refundable tax credit	– 0	– 1,000
Net tax owed	$700	
Net tax refund		$200
Net additional tax savings resulting from the credit		**$900**

Common Federal Income Tax Credits

Tax credits come in two forms.

1. **Refundable tax credits** can reduce a household's assessed tax below zero, resulting in the federal government paying the household money when taxes are filed.
2. **Nonrefundable tax credits** can reduce a household's assessed tax to zero but cannot make it negative (where the federal government owes a taxpayer money).

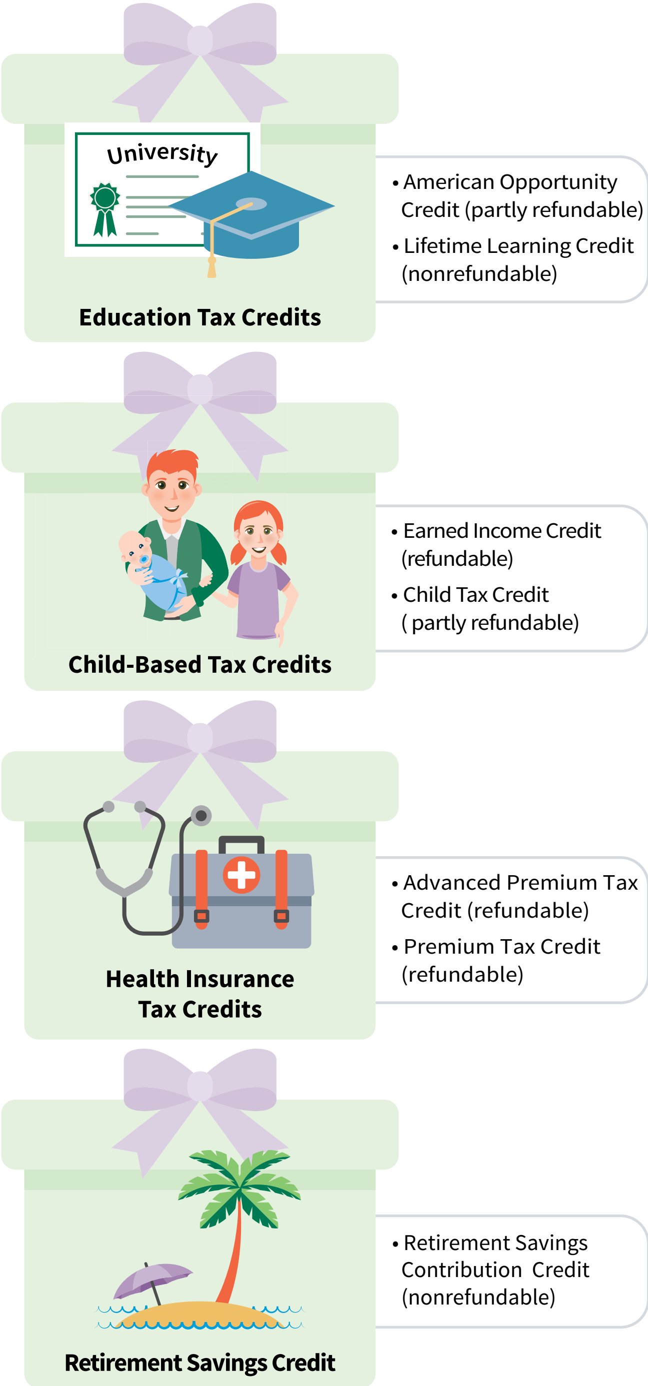
Several different types of refundable and nonrefundable tax credits are available to individuals and families. **Illustration 4.4.3** shows four of the most popular categories of tax credits (see **Helpful Hint**).

HELPFUL HINT

Congress offers most federal income tax credits as an incentive to encourage individuals to take action that will benefit them, as well as the overall economy, in the long run.

ILLUSTRATION 4.4.3

Summary of Valuable and Widely Available Tax Credits



Education Tax Credits

Because the government values your education, Congress has enacted tax credits so that you don't have to pay as much in taxes while you are going to school. In fact, you might get some money back from the government when going to school. One of these education tax credits is the **American Opportunity Tax Credit**. This is a partly refundable tax credit that is available to whomever claims the student as a dependent on their tax return. The credit works as follows.

- The credit is available for undergraduate students who are still in their first 4 years of post-secondary education and are seeking a degree.

- Qualifying tuition and fees that you (or your parents) pay, plus the cost of required course materials, are used to calculate this credit (see **Helpful Hint**).
- The credit is calculated by multiplying the first $2,000 of qualifying expenses by 100% and then multiplying any remaining qualifying expenses by 25%. Total qualifying expenses are capped at $4,000.
- The maximum credit that a taxpayer can qualify for is $2,500 [(100% × $2,000) + (25% × $2,000)]; 40% of the credit is refundable (maximum refundable portion is $1,000).

The **Lifetime Learning Credit** is also available to taxpayers who do not qualify for the American Opportunity Credit.

- The maximum Lifetime Learning Credit is $2,000; however, the credit is nonrefundable.
- The Lifetime Learning Credit is calculated by multiplying the amount of qualifying tuition and fee expenses (capped at $10,000) by 20%.

HELPFUL HINT

Note that if you use student loans to pay your tuition, you can still claim a tax credit. However, the credit is not available to students who have a felony drug conviction. Also, the credit is subject to income phase outs, which makes the credit less valuable to high-income households.

Tax Credits for Dependent Children

If you have a child or are thinking about having children in the future, there are three refundable credits that you should know about.

1. The **Earned Income Tax Credit** is a refundable credit designed to reward work and boost the earnings of low-income workers.
2. The **Child Tax Credit** provides a maximum $2,000 nonrefundable credit per qualifying child in the household. Up to $1,400 of the Child Tax Credit is refundable.
3. A dependent credit can be claimed for qualifying dependents who are not eligible for the Child Tax Credit. This dependent credit is a nonrefundable $500 credit per qualifying dependent.

The Earned Income Credit gives workers a refundable tax credit based on their income and household size. In 2018, the maximum Earned Income Credit for a family with three or more qualifying children was $6,444. For a family with one qualifying child, the maximum amount was $3,468. Some low-wage workers without dependent children may qualify for a much smaller Earned Income Credit amount (maximum credit of $520 in 2018).

The Child Tax Credit is only available to individuals with earned income. Keep in mind that all tax credits phase out as income increases. For example, the Earned Income Credit is completely phased out (eliminated) for married-filing-jointly taxpayers when adjusted gross income exceeds $54,998 (for 2018).

Health Insurance Tax Credits

Congress offers two credits designed to help individuals and households avoid potentially catastrophic medical costs by purchasing health insurance.

1. The **Premium Tax Credit** is a refundable credit available to taxpayers who purchase a health insurance plan through a qualified state or federal exchange and who do not have the option to purchase health insurance coverage through their employer or through a family member's health insurance policy. The Premium Tax Credit is designed to make health insurance more affordable.
2. The **Advanced Premium Tax Credit** can be used during the entire year to lower the cost of monthly premiums on health insurance plans that are purchased through a state or federal health insurance exchange. If a taxpayer chooses to receive the Advanced Premium Tax Credit, the amount of the credit will be estimated based on what the taxpayer thinks he or she will earn during the coming year. At the end of the year, the difference between this estimated Advanced Premium Tax Credit and the actual Premium Tax Credit is calculated. At that time, the taxpayer may receive an additional refund or be required to repay the excess Advanced Premium Tax Credit received.

HELPFUL HINT

Not only are there credits for education and health care, but there is also a credit for those who voluntarily save for retirement.

Tax Credits for Retirement Savings Contributions

Congress wants you to be financially successful (see **Helpful Hint**). As a result, Congress set up a plan to help some taxpayers lower taxes through the Retirement Savings Contribution Credit. The **Retirement Savings Contribution Credit** is a nonrefundable tax credit of up to $1,000 for taxpayers with modest incomes who contribute up to $2,000 to their own retirement savings accounts. You can qualify by meeting one of the following requirements.

- Your income is *below* a certain amount ($31,500 for singles, $63,000 for married filing jointly in 2018) and you contribute to an IRA or Roth IRA.
- You make voluntary contributions to an employer-sponsored retirement plan such as a 401(k), 403(b), or SIMPLE IRA plan (we will discuss these plans later in the text).

Note that this credit is not available to full-time students. This credit also phases out relatively quickly as income rises.

Excess Federal Income Tax Withholdings

Perhaps the most common refundable item for taxpayers is based on overpaying federal income taxes during the year.

HELPFUL HINT

The W-4 form shown in Illustration 4.4.4 may look slightly different then the one you complete.

- When you start a job, you need to complete several forms for your employer.
- One of these documents is a W-4 form, shown in **Illustration 4.4.4** (see **Helpful Hint**).
- Based on this form, federal (and sometimes state) income taxes are automatically withheld from each of your paychecks.

ILLUSTRATION 4.4.4

IRS Form W-4 Used for Tax Withholding

Separate here and give Form W-4 to your employer. Keep the top part for your records.

Form **W-4**
Department of the Treasury
Internal Revenue Service

Employee's Withholding Allowance Certificate

▶ **Whether you are entitled to claim a certain number of allowances or exemption from withholding is subject to review by the IRS. Your employer may be required to send a copy of this form to the IRS.**

1 Your first name and middle initial | Last name | 2 Your social security number

Home address (number and street or rural route)

3 ☐ Single ☐ Married ☐ Married, but withhold at higher Single rate.
Note: If married, but legally separated, or spouse is a nonresident alien, check the "Single" box.

City or town, state, and ZIP code

4 If your last name differs from that shown on your social security card, check here. You must call 1-800-772-1213 for a replacement card. ▶ ☐

5 Total number of allowances you are claiming (from line H above or from the applicable worksheet on page 2) 5

6 Additional amount, if any, you want withheld from each paycheck . . . . . 6 $

7 I claim exemption from withholding, and I certify that I meet **both** of the following conditions for exemption.
• Last year I had a right to a refund of all federal income tax withheld because I had no tax liability, and
• This year I expect a refund of all federal income tax withheld beacuse I expect to have no tax liability.
If you meet both conditions, write "Exempt" here . . . . . ▶ 7

Under penalties of perjury, I declare that I have examined this certificate and, to the best of my knowledge and belief, it is true, correct, and complete.

Employee's signature
(This form is not valid unless you sign it.) ▶ Date ▶

8 Employer's name and address (Employer: Complete lines 8 and 10 only if sending to the IRS.) | 9 Office code (optional) | 10 Employer identification number (EIN)

For Privacy Act and Paperwork Reduction Act Notice, see page 2. Cat. No. 10220Q Form **W-4**

When you complete your Form 1040 (or comparable tax form), you may find that you qualify for a tax refund as a result of **excess federal income tax withholdings**. This happens when you have had too much in taxes taken out of your paychecks during the year.

- If this occurs, you may want to *increase* the number of allowances claimed on your W-4 form, which will *decrease* the amount of taxes automatically withheld. You can also file as exempt.
- Conversely, if you end up owing taxes each year when you file your tax return, you may want to *increase* your withholdings by *reducing* the number of allowances claimed on your W-4 form.
- Many individuals adjust their allowances from one year to the next depending on their personal circumstances (see **Helpful Hint**).

HELPFUL HINT

Your W-4 form can be easily changed by contacting your employer's human resources department.

Let's see how some of these tax credits work in practice. Duane and Kaylee are married, over age 25, enrolled in college on a full-time basis, and work part-time jobs. Because they are married and support themselves, they can no longer be claimed as dependents on their

parents' tax returns. Given their income and filing status, they owe no federal income tax for the year. However, they should still file a Form 1040 for the following reasons.

- Filing a return will ensure that they receive all money withheld from their paychecks for federal income taxes.
- They will be eligible to receive a refundable tax credit based on the amount of money paid for tuition and fees. Duane and Kaylee paid $3,000 in tuition and fees (qualified higher education expenses), which entitles them to claim the American Opportunity Credit for $2,250, of which $900 is a refundable credit.
- Because they purchased their health insurance plan through the Health Insurance Marketplace, they qualify for a premium tax credit of $80. If they continue to pay their health insurance premiums next year, they will qualify for a larger premium tax credit in the future.
- Although Duane and Kaylee do not have children, they may qualify for a small Earned Income Credit.

It is easy to see how these tax credits, along with the federal income taxes that were withheld from their paychecks, affect their refund.

Importance of Filing a Tax Return

Many people wrongly assume that they do not need to file a tax return because their income is "too low." Although it is true that many individuals with modest incomes are not legally obligated to file a tax return because they don't owe any taxes, these same individuals may miss out on claiming large refunds if they do not file a tax return. In general, if your standard deduction is more than your gross income, then you are not *required* to file a federal income tax return. However, as you have learned throughout this topic, you may be eligible for a significant refund resulting from excess taxes withheld from your paycheck, the American Opportunity Credit, or other refundable credits (see **Helpful Hint**).

HELPFUL HINT

If you have questions or concerns about your rights as a taxpayer, you can contact the Taxpayer Advocate Service.

For example, meet Latisha, who is in her third year of college. Consider these facts.

- Latisha's parents only occasionally help with small expenses. She pays for everything else by working part-time and taking out student loans.
- Latisha's parents do not claim her as dependent on their tax return.
- From her work as a waitress, she made $9,000 last year.
- Latisha paid $3,000 in tuition, fees, and books. She used money from her student loans to pay for these expenses.

Legally, Latisha is not required to file a tax return because her total income ($9,000) is less than her standard deduction ($12,000 in 2018). Latisha, who has never filed a tax return, is happy because she thinks it would be a huge hassle to complete one. It is March 23, and tax returns are due by mid-April. What would you recommend that Latisha do?

You should recommend that Latisha file a tax return for this year and her prior 2 years of college. Here's why.

- Because Latisha is only filing a tax return to claim a refund, she has up to 3 years from the original due date of the tax return to file a return and claim her refund.
- For the current year, Latisha will not owe any income taxes and will get back all her federal income tax withholdings (she will not get back her FICA withholdings).
- In addition to getting back her income tax withholdings, Latisha will also qualify for a $2,250 American Opportunity Tax Credit. The $2,250 credit will be divided into a $1,350 nonrefundable credit and a $900 refundable credit. Because Latisha does not owe any taxes, the $1,350 nonrefundable portion of the American Opportunity Credit does not benefit her. However, the $900 refundable portion of the American Opportunity Credit will be added to her tax refund.
- Latisha should also file separate tax returns for the prior 2 years. If her tax situation for the prior 2 years is similar to her current one (she is not claimed by her parents as a dependent), she will receive similar refunds from the federal government for the prior 2 years.

So, keep Latisha in mind when early April rolls around. You might just find that the government may be paying you rather than the other way around!

Concepts in Action

Juan is attending school full-time and working part-time at a grocery store. Juan contributes $25 a month to a retirement savings plan at work. He earned $15,000 this past year and paid $5,000 for tuition, fees, and books. Juan lives with a roommate and takes out student loans to make ends meet. Does Juan need to file a tax return? What advice do you have for Juan regarding his tax situation?

Solution

Juan is required to file a tax return because his gross income is greater than his standard deduction. However, Juan may qualify for the American Opportunity Credit if he is still within the first 4 years of his college education. Although it is great that Juan is saving for retirement (his contributions to his retirement plan will lower his gross income), he will not qualify for the Retirement Savings Contribution Credit because he is a full-time student.

End-of-Topic Assessment

Multiple-Choice Questions

1. Negative effective income tax rates result from:
   - **a.** negative tax bracket rates applied to low-income households.
   - **b.** nonrefundable tax credits.
   - **c.** refundable tax credits.
   - **d.** negative tax bracket rates, nonrefundable tax credits, and refundable tax credits.
2. What percentage of households in the United States have a negative effective income tax rate?
   - **a.** Approximately 10%.
   - **b.** Approximately 20%.
   - **c.** Approximately 30%.
   - **d.** Approximately 40%.
3. A refundable tax credit is one that:
   - **a.** may result in the federal government giving money back in excess of taxes paid.
   - **b.** always results in your tax liability being eliminated.
   - **c.** may result in a negative effective tax rate.
   - **d.** both may result in the federal government giving money back in excess of taxes paid and may result in a negative effective tax rate.
4. A nonrefundable tax credit is one that may:
   - **a.** result in a negative tax rate.
   - **b.** eliminate your tax liability.
   - **c.** create a refund more than taxes paid.
   - **d.** None of the answer choices is correct.
5. A common tax credit available to college students just starting their education is the:
   - **a.** American Opportunity Credit.
   - **b.** Lifetime Learning Credit.
   - **c.** Premium Tax Credit.
   - **d.** Earned Income Credit.
6. The maximum American Opportunity Credit that a taxpayer may receive is:
   - **a.** $1,000.
   - **b.** $2,000.
   - **c.** $2,500.
   - **d.** $4,000.
7. The maximum refundable portion of the American Opportunity Credit is:
   - **a.** $1,000.
   - **b.** $2,000.
   - **c.** $2,500.
   - **d.** $4,000.
8. The Retirement Savings Contribution Credit is designed to help which individual(s) save for retirement?
   - **a.** College students.
   - **b.** Upper-income households.
   - **c.** Households with children.
   - **d.** Middle- and lower-income households.

9. Which of the following individuals is most likely to qualify to receive a refundable tax credit?

I. A junior in college using student loans to pay her tuition.

II. A single mother with a 5-year-old child; the mother works full-time earning $25,000 a year.

III. An individual who purchased health insurance through the marketplace.

a. I, II, and III.

b. I and III only.

c. II and III only.

d. I and II only.

10. Sheryl would like to adjust the amount of income tax withheld from her paycheck. She should contact her employer and fill out a new:

a. W-2 form.

b. W-4 form.

c. W-8 form.

d. 1099-Withholding.

Adventures in Personal Finance

Short Answer

1. **Calculate** Let's assume your marginal tax rate is 24% and you claim the standard deduction because you do not have enough itemized deductions. How much tax savings would each of the following items provide, and is there anything else required for you to realize the tax savings?

a. $1,000 refundable tax credit.

b. $1,000 nonrefundable tax credit.

c. $1,000 FOR AGI deduction.

d. $1,000 FROM AGI deduction.

2. Discuss which education credit undergraduate students in their third year would prefer: the American Opportunity Credit or the Lifetime Learning Credit.

3. How do negative effective tax rates contribute to the progressive structure of the U.S. tax system?

Explore

1. The Premium Tax Credit is part of the Affordable Care Act. Go to the HealthCare website (the official site of the Affordable Care Act) to see if you would qualify for a tax credit for health insurance.

2. Congress often uses the tax code to incentivize certain behavior, such as energy efficiency. One such tax credit is the nonrefundable Plug-In Electric Drive Vehicle Credit. Research this credit to see by how much you could reduce your taxes. Is this enough to motivate you to purchase a plug-in electric vehicle? Does your state offer electric vehicle tax credits? If so, what is the amount? What is your opinion on these types of credits?

Expanded Learning Activity

Many individuals like to have excess income tax withholdings taken from their paychecks as "forced savings," knowing that they will get the excess withholdings back as a tax refund when they file their taxes. Tax refunds are commonly used to get caught up on past-due bills, pay off debts, purchase a large ticket item, buy something special, or just set some money aside in savings.

a. Discuss the benefits and costs of using excess income tax withholdings as a forced savings plan.

b. What alternative to "forced savings" plans would be better than excess withholdings?

Federal Self-Employment Taxes

LO 4.5 Explain how to apply Medicare and Social Security taxes to self-employed individuals.

It is exciting to get your first job, especially if it is the job that you really want. In the excitement of the new opportunity most people rarely ask, "Will I be working as an employee or an independent contractor?" However, the answer to this question has significant tax implications. In many situations, an employee and an independent contractor may do similar jobs. But from the IRS's viewpoint, the two individuals will be treated differently when they file their taxes. In this topic, we discuss both the taxes and deductions that apply to self-employed individuals.

Employee versus Self-Employment Taxes

If you work, either part-time or full-time, how do you know if you are an employee or are self-employed? Although there are many rules that determine whether someone is an employee, one of the clearest indicators is whether the employer is withholding payroll taxes.

- If you are an employee, each paycheck you receive will show withholdings for FICA taxes.
- If you are an independent contractor (self-employed), then there will not be any FICA taxes withheld each time you are paid.
- At the end of the year, to summarize income earned, an employee receives a W-2 statement whereas a self-employed individual receives a 1099 statement.

Classification from an Employer's Perspective

From an employer's perspective, classifying workers as self-employed contractors rather than as employees lowers the overall amount of taxes the employer must pay by shifting those taxes to workers. In some situations, however, an employer may be violating labor laws by paying workers as independent contractors rather than as employees.

- Employers might classify employees as contractors to avoid providing benefits for workers, such as health insurance coverage.
- Employers or workers can file Form SS-8 with the IRS if there is a question about how a worker should be classified; the IRS will then determine who is responsible for FICA or self-employment taxes.
- A word of caution is in order: filing this form may create significant tax liabilities for an employer who has wrongly classified workers. This, in turn, could strain employer–contractor relations.

Working as an Employee versus Working as an Independent Contractor

As an independent contractor, you may perform similar duties as an employee within the same company. However, there are some significant differences. For example, consider Jill and Lisa. Both work as administrative assistants for local businesses. Although they are both paid the same amount ($12 per hour), Jill is paid as an employee of the company, whereas Lisa is paid as an independent contractor (thus, she is self-employed). For the year, both Jill and Lisa earned $20,000.

As an independent contractor:

- Lisa is paid only when she is working. If she goes on vacation, is sick, or is told by the business not to come in that day, she does not get paid.

- Lisa must pay for all her own expenses related to work (if there are any). Although these deductions will lower Lisa's taxable income, these expenses may also eliminate any profit she can make in one day.
- Lisa is responsible for making quarterly estimated tax payments for her federal income tax and for her FICA taxes; she therefore must keep track of her income and expenses.
- The company paying Lisa will report how much was paid to Lisa for the year on a Form 1099-MISC (we will discuss this form in more detail in the next section).
- As a self-employed individual, Lisa can also claim the **pass-through deduction** on her income. The pass-through deduction allows Lisa to lower her taxable income by 20% of her qualified business income. In this case, it would be 20% of her net income from self-employment.

In contrast, think about Jill, who is an employee of the business where she works.

- Jill is paid an hourly wage for a set number of hours each week. She may even receive overtime, sick, vacation, and holiday pay.
- Jill may incur some expenses in carrying out her job duties as an employee. Generally, employers can reimburse someone like Jill for any expenses that she incurs to perform her job.
- When Jill is paid, her employer withholds taxes from her paycheck and remits the taxes to the IRS. Jill's employer will send her a W-2 form at the end of the year. The form, similar to the one shown in **Illustration 4.5.1**, will indicate the total amount Jill earned during that calendar year.

ILLUSTRATION 4.5.1 **Jill's W-2 Form**

Void ☐	**a** Employee's social security number 123-45-6789	**For Official Use Only ▶** **OMB No. 1545-0008**
b Employer identification number (EIN) 98-7654321	**1** Wages, tips, other compensation 20,000	**2** Federal income tax withheld 800.00
c Employer's name, address, and ZIP code JPE Industries 123 Main St. Midville, State 99999	**3** Social security wages 20,000	**4** Social security tax withheld 1,240.00
	5 Medicare wages and tips 20,000	**6** Medicare tax withheld 290.00
	7 Social security tips	**8** Allocated tips
d Control number	**9** Verification code	**10** Dependent care benefits
e Employee's first name and initial Jill / Last name Employee / Suff.	**11** Nonqualified plans	**12a** See instructions for box 12 Code
Jill Employee 321 Center St. Midville, State 99999	**13** Statutory employee ☐ Retirement plan ☐ Third-party sick pay ☐	**12b** Code
	14 Other	**12c** Code
f Employee's address and ZIP code		**12d** Code

15 State	Employer's state ID number	**16** State wages, tips, etc.	**17** State income tax	**18** Local wages, tips, etc.	**19** Local income tax	**20** Locality name
ST	XX 987654	$ 20,000	543.00			

Form **W-2** **Wage and Tax Statement**

Copy A For Social Security Administration — Send this entire page with Form W-3 to the Social Security Administration; photocopies are **not** acceptable.

Department of the Treasury—Internal Revenue Service

For Privacy Act and Paperwork Reduction Act Notice, see the separate instructions.

Cat. No. 10134D

W-2 Form: Social Security and Medicare Taxes Withheld

Let's look at Jill's W-2 in more detail. Jill's employer withheld taxes from each paycheck throughout the year, such as federal income taxes (box 2), Social Security taxes (box 4), and Medicare taxes (box 6). Her employer paid these taxes to the federal government on Jill's behalf. Recall that FICA includes two separate taxes: Social Security tax and Medicare tax.

The Social Security program is funded through the collection of Social Security taxes paid from FICA withholdings.

- The actual name of the Social Security tax is **Old-Age, Survivors, and Disability Insurance (OASDI)**.
- The tax rates are 6.2% for employees and 6.2% for employers, for a total tax rate of 12.4%.
- The tax base for OASDI is generally the total, or gross, income paid to the employee. However, the tax base stops at $128,400 (as of 2018). Income above this amount is not subject to Social Security taxes.

Medicare is a national health insurance program for individuals age 65 years and older. This tax provides the primary funding for the Medicare program.

- The Medicare tax is formally known as the **Health Insurance (HI)** tax.
- Employees pay a tax rate of 1.45% on all earned income; employers pay a matching 1.45% tax rate on the employee's total earned income, for a total combined tax rate of 2.9%.
- Higher-income employees pay an additional 0.9% Additional Medicare Tax on earnings above $200,000 ($250,000 for married-filing-jointly taxpayers).
- Unlike the Social Security tax, the Medicare tax applies to all earned income and does not phase out.

HELPFUL HINT

Does this mean that self-employed individuals do not have to pay Social Security and Medicare taxes? Of course not. Instead, those who are self-employed must pay these taxes, as well as federal and state income taxes, themselves.

Form 1099-MISC

Now let's look at Lisa's situation. As an independent contractor, Lisa is considered self-employed and will receive a Form 1099-MISC at the end of the tax year, similar to the one shown in **Illustration 4.5.2**. Regardless of whether or not she actually receives a Form 1099-MISC, Lisa will still need to report all the money she received as income on her taxes. This includes cash, checks, and bartering exchanges (see **Helpful Hint**).

ILLUSTRATION 4.5.2 Lisa's Form 1099-MISC

☐ VOID ☐ CORRECTED

PAYER'S name, street address, city or town, state or province, country, ZIP or foreign postal code, and telephone no. LPC Industries 123 Elm St. Franklin, State 99999		1 Rents $ 2 Royalties $	OMB No. 1545-0115 Form **1099-MISC**	**Miscellaneous Income**
		3 Other income $	4 Federal income tax withheld $	**Copy A For Internal Revenue Service Center** **File with Form 1096.**
PAYER'S federal identification number 87-6543219	RECIPIENT'S identification number 234-56-7890	5 Fishing boat proceeds $	6 Medical and health care payments $	
RECIPIENT'S name Lisa Contractor		7 Nonemployee compensation 20,000.00 $	8 Substitute payments in lieu of dividends or interest $	For Privacy Act and Paperwork Reduction Act Notice, see the **General Instructions for Certain Information Returns.**
Street address (including apt. no.) 321 Elm St.		9 Payer made direct sales of $5,000 or more of consumer products to a buyer (recipient) for resale ▶ ☐	10 Crop insurance proceeds $	
City or town, state or province, country, and ZIP or foreign postal code Franklin, State 99999		11	12	
Account number (see instructions)	FATCA filing requirement ☐ / 2nd TIN not. ☐	13 Excess golden parachute payments $	14 Gross proceeds paid to an attorney $	
15a Section 409A deferrals $	15b Section 409A income $	16 State tax withheld $ $	17 State/Payer's state no.	18 State income $ $

Form **1099-MISC** Cat. No. 14425J www.irs.gov/form1099misc Department of the Treasury - Internal Revenue Service

There are some important differences between a 1099-MISC and a W-2.

- The Form 1099-MISC shows how much Lisa was paid. Unlike an employee, no withholdings will be shown on the form.
- For Lisa, there is no box on Form 1099-MISC to show any types of withholdings; the total amount Lisa received is reported in box 7.

Calculating Self-Employment Taxes

Instead of an employer automatically withholding a portion of taxes from each paycheck (which it then pays to the IRS), self-employed individuals must make payments directly to the IRS and, if applicable, their state tax revenue office. In addition, self-employed individuals must pay taxes as both an employee and an employer. As a result, for tax purposes, a self-employed individual must:

- Pay regular federal, state, and local income taxes directly through quarterly **estimated tax payments** throughout the year based on the income earned. Estimated tax payments are due 15 days after the end of each calendar quarter (3-month period). For example, the estimated tax payment for the first three months of the year (January, February, and March) is due on April 15 (see **Helpful Hint**).
- Pay the employee's share of FICA taxes (6.2% OASDI and 1.45% HI for a total of 7.65%), plus the employer's share of the FICA taxes (6.2% OASDI and 1.45% HI for a total of 7.65%). The combined tax rates for OASDI and HI (15.3%) paid by self-employed individuals are commonly referred to as the **self-employment tax**.
- Pay the 15.3% self-employment tax if income is greater than $400 but less than $128,400 (in 2018) of earned income. For example, if you are single, self-employed, and in the marginal tax rate bracket of 24%, your tax rate on the next dollar that you earn will be approximately 39.3% (24% + 15.3%)!
- For self-employment income greater than $128,400 (in 2018), the self-employment tax rate is 2.9%.

HELPFUL HINT

By making estimated tax payments during the year, a self-employed individual can avoid being charged interest and penalties that might be levied by the IRS if more than $1,000 is owed in taxes at the end of the year.

Does this seem like you might pay more taxes if you are self-employed rather than work for an employer? Let's look closer at self-employment taxes to see if this is true. Self-employed individuals (as well as other individuals with taxable income from which no tax has been withheld, such as scholarships and grants in excess of tuition and fees) are required to make quarterly tax payments directly to the IRS.

Estimating Self-Employment Tax

Estimating your self-employment tax may seem challenging, but it is really rather simple.

- Think back to the basic tax formula: Tax Base × Tax Rate.
- For self-employed individuals, the tax base is calculated as net earnings from self-employment multiplied by 0.9235. This reduction to self-employment income is to make the self-employment tax more fair.
- **Net earnings** is simply the total amount of money received from the self-employment activity minus expenses that are incurred to generate that income. If you were to start a business delivering and selling fresh donuts to college dorms, then some of the expenses that you would likely incur to produce that income would be the cost of the donuts, transportation expenses, and marketing expenses, all of which reduce gross income.

If the tax base plus any other earned income you have is less than $128,400 (in 2018), then the applicable tax rate is 15.3%, which is the combined tax rate for Social Security and Medicare

taxes. You would then use this amount, plus an estimate of the income tax that would be owed on your self-employment earnings, to make your estimated quarterly payment. You can use Schedule SE from the IRS website, similar to that shown in **Illustration 4.5.3**, to calculate your self-employment tax.

ILLUSTRATION 4.5.3 **Lisa's Self-Employment Tax**

SCHEDULE SE (Form 1040)

Department of the Treasury Internal Revenue Service (99)

Self-Employment Tax

▶ **Information about Schedule SE and its separate instructions is at *www.irs.gov/schedulese.***

▶ **Attach to Form 1040 or Form 1040NR.**

OMB No. 1545-0074

Attachment Sequence No. **17**

Name of person with **self-employment** income (as shown on Form 1040 or Form 1040NR)	Social security number of person with **self-employment** income ▶
Lisa Contractor	234-56-7890

Section A—Short Schedule SE. Caution. Read above to see if you can use Short Schedule SE.

1a	Net farm profit or (loss) from Schedule F, line 34, and farm partnerships, Schedule K-1 (Form 1065), box 14, code A	**1a**		
b	If you received social security retirement or disability benefits, enter the amount of Conservation Reserve Program payments included on Schedule F, line 4b, or listed on Schedule K-1 (Form 1065), box 20, code Z	**1b**	(	)
2	Net profit or (loss) from Schedule C, line 31; Schedule C-EZ, line 3; Schedule K-1 (Form 1065), box 14, code A (other than farming); and Schedule K-1 (Form 1065-B), box 9, code J1. Ministers and members of religious orders, see instructions for types of income to report on this line. See instructions for other income to report	**2**	20,000	00
3	Combine lines 1a, 1b, and 2	**3**	20,000	00
4	Multiply line 3 by 92.35% (0.9235). If less than $400, you don't owe self-employment tax; **don't** file this schedule unless you have an amount on line 1b ▶	**4**	18,470	00
	Note. If line 4 is less than $400 due to Conservation Reserve Program payments on line 1b, see instructions.			
5	**Self-employment tax.** If the amount on line 4 is: • $128,400 or less, multiply line 4 by 15.3% (0.153). Enter the result here and on **Form 1040, line 57,** or **Form 1040NR, line 55** • More than $128,400, multiply line 4 by 2.9% (0.029). Then, add $19,645.20 to the result. Enter the total here and on **Form 1040, line 57,** or **Form 1040NR, line 55**	**5**	2,825	91
6	**Deduction for one-half of self-employment tax.** Multiply line 5 by 50% (0.50). Enter the result here and on **Form 1040, line 27,** or **Form 1040NR, line 27** — **6** — 1,412 — 96			

For Paperwork Reduction Act Notice, see your tax return instructions. Cat. No. 11358Z **Schedule SE (Form 1040)**

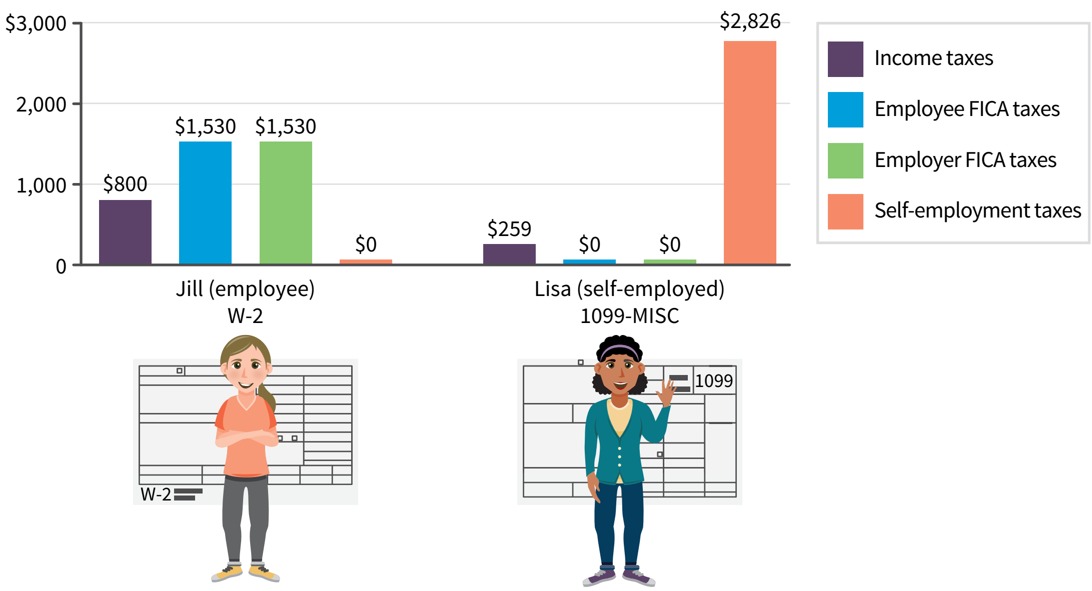
Let's now return to Jill and Lisa's situation. **Illustration 4.5.4** shows the amount of taxes paid by Jill and Lisa, as well as the amount of taxes paid by Jill's employer.

- This assumes that Jill and Lisa are both single and each takes the standard deduction.
- The comparison also assumes that Lisa does not deduct any business-related expenses against her self-employment income.

Jill, the employee, pays total taxes of $2,330 ($800 income tax + $1,530 FICA taxes). Her employer also pays $1,530 in FICA taxes based on her earnings. Lisa, who is self-employed, pays total taxes of $3,085 ($259 income tax + $2,826 self-employment tax). Lisa can claim the pass-through deduction on her self-employment income and a FOR AGI deduction equal to one-half of the self-employment tax that she must pay, which would be $1,413 in this example. These deductions reduce her taxable income to $2,588.

As you can see, it is important to know ahead of time whether your employer will be paying you as an employee (giving you a W-2) or as an independent contractor (providing a 1099). If you are being paid as an independent contractor, then you will need to take responsibility for

ILLUSTRATION 4.5.4 **Comparison of Taxes Paid by Jill and Lisa**



keeping track of your income, your expenses (such as the miles you drive for your job), and consequently your taxes.

Self-Employment Tax Deduction for Federal Taxes

If you do owe self-employment tax, you can take a FOR AGI deduction equal to one-half (50%) of the amount of your self-employment tax. This deduction will lower your adjusted gross income (AGI) on your federal income tax return and may lower your income tax as well. However, this deduction will not lower your self-employment tax.

Although self-employed individuals pay more in self-employment taxes, there are many more tax benefits available to self-employed individuals, which include the ability to take additional deductions when calculating AGI.

- For example, self-employed individuals often use their home as their primary business location, so when they drive anywhere for work (to their worksite or to the store to get supplies for work) they can deduct their miles driven as a business expense.
- If a space in the home is used exclusively for work, a self-employed individual can deduct some of the costs of her or his home (e.g., utilities, phone and Internet lines, maintenance costs, etc.) in proportion to her or his home office space.
- Generally, a self-employed individual who keeps good records (e.g., mileage and expense records) might actually pay lower taxes than a comparable employee because of all the deductions that she or he can claim.

Finally, it is also important to remember that being self-employed lets you set your own pay rates and seek out your own opportunities. So, although you may pay a little more in taxes, you may also have the opportunity to earn much more as well.

Form 1040 Schedule C

Self-employment income and related expenses are most often reported on Schedule C of Form 1040. Schedule C provides self-employed individuals the opportunity to report their total self-employment earnings and all the expenses incurred in earning that income. The net business income, including any business-related deductions, is then reported on Form 1040 as self-employment income.

Concepts in Action

Joe is a college student who came up with the great idea of delivering food from local restaurants to student dorms. During the year, Joe earned $22,000 from the food-delivery service. Joe spent $18,000 purchasing the food at the restaurants and $100 marketing his service. Joe used the standard mileage rate to calculate his driving expense, which came out to be $2,000. If this is Joe's only income, how much is his self-employment tax?

Solution

Joe's net earnings are $1,900 ($22,000 – $18,000 – $100 – $2,000). After multiplying Joe's net earnings by 0.9235, his tax base for self-employment tax is $1,755 ($1,900 × 0.9235). Joe's self-employment tax rate is 15.3%, which results in self-employment tax of $269 ($1,755 × 0.153). Because Joe has no other income and his total tax is less than $1,000 for the year, Joe does not need to make estimated tax payments; he can simply pay it all at the end of the year. In this example, Joe will not owe any income taxes on his income because his standard deduction will eliminate his taxable income, but he will still owe the self-employment tax.

End-of-Topic Assessment

Multiple-Choice Questions

1. An easy way to know if you will be taxed as a self-employed individual is:
   - **a.** to observe how others in the same line of work are taxed.
   - **b.** whether you receive a W2 or a W4.
   - **c.** whether you receive a W2 or a Form 1099 MISC.
   - **d.** whether you receive a W4 or a Form 1099 MISC.
2. Self-employment tax consists of:
   - **a.** a special tax assessed only on self-employed individuals.
   - **b.** taxes that employees and employers also pay.
   - **c.** taxes designed to benefit large corporations.
   - **d.** all taxes paid by self-employed individuals.
3. Social Security and Medicare taxes are paid by:
   - **a.** employers.
   - **b.** employees.
   - **c.** self-employed individuals.
   - **d.** employers, employees, and self-employed individuals.
4. The total Social Security tax rate is _________, half of which is paid by the employer and half by the employee (or all paid by the self-employed individual).
   - **a.** 6.20%
   - **b.** 7.65%
   - **c.** 12.40%
   - **d.** 15.30%
5. The self-employment tax rate is made up of the Social Security portion, which is _________, and the Medicare portion, which is _________.
   - **a.** 6.2%, 7.65%
   - **b.** 1.45%, 6.2%
   - **c.** 1.45%, 7.65%
   - **d.** 6.2%, 1.45%
6. If you are self-employed, one way to avoid a penalty from the IRS is to:
   - **a.** owe less than $1,000 when you file your federal income tax return.
   - **b.** make correct and on-time estimated tax payments.
   - **c.** be sure to pay all taxes owed by April 15 of the following year.
   - **d.** both owe less than $1,000 when you file your federal income tax return and make correct and on-time estimated payments.
7. Estimated self-employment taxes should be paid:
   - **a.** monthly.
   - **b.** quarterly.
   - **c.** semiannually.
   - **d.** annually.
8. If your tax base for self-employment earnings exceeds $128,400 in 2018, then the self-employment tax rate on the portion of earnings more than $128,400 is:
   - **a.** 15.3%.
   - **b.** 12.4%.
   - **c.** 7.65%.
   - **d.** 2.90%.
9. **Calculate** Jeff drives for a ride-sharing company in the evenings to earn some extra money to pay for college. Jeff's net earnings

from self-employment work were $4,000. If this is Jeff's only income, what is his self-employment tax?

a. $565.

b. $612.

c. $0.

d. $458.

10. **Calculate** Ben delivers pizza to earn some extra money to pay for college. If Ben's self-employment tax is $1,500, how much of it can he deduct as a FOR AGI deduction?

a. $1,500.

b. $1,000.

c. $750.

d. $0.

Adventures in Personal Finance

Short Answer

1. Samantha is a college student. To earn some extra money, she provides tutoring in the evenings and on weekends. What type of expenses might Samantha be able to use to lower her net earnings from self-employment and thus reduce her self-employment taxes?

2. What are some of the tax benefits of being self-employed? Are there other advantages associated with being self-employed?

3. The OASDI tax goes away after a taxpayer earns a predetermined amount of income. Why would Congress allow certain taxpayers to stop paying OASDI taxes?

Explore

1. It is not just self-employed individuals who should be making estimated tax payments. Can you think of other instances where an individual has income or gains that taxes are not withheld and estimated tax payments should be made? An Internet search may help you identify some additional examples.

2. You don't need to wait until the end of the year to know whether you are an employee or paid as an independent contractor. What are some ways for you to know whether you are an employee or independent contractor long before the end of the tax year?

Expanded Learning Activity

If you are self-employed, it might be easy to overlook that you need to set aside some of your earnings to pay taxes. Remember that your estimated tax payment includes both an estimate of your income tax as well as an estimate of your self-employment tax. Do you have enough money in your checking or savings account to pay the estimated tax payment amount? Consider that a self-employed individual earning $10,000 a year may need to pay approximately $1,413 in self-employment taxes, or $353 on a quarterly basis. If you were subject to estimated tax payments but did not typically have sufficient money in your checking or savings account, what are some strategies you could use to be sure you have the money needed to make the estimated tax payment?

Income Tax-Planning Strategies

LO 4.6 Identify income tax-planning strategies to minimize taxes and maximize after-tax wealth.

Imagine that every weekday on your way to work or school you find $5. It is usually in a different place, but every day you find it. That sounds great, but is it realistic? Actually, it is because there are certain things that you can begin doing today that will give you a few extra dollars every day in the form of tax savings. You can then use this additional money to help you reach your goals and keep you moving forward on your lifetime financial journey.

In this topic, we demonstrate ways for you to minimize taxes using tax-avoidance strategies and tax loopholes. **Tax avoidance** is the *legal*, systematic structuring of transactions to minimize taxes. Legal strategies to reduce the amount of taxes owed are often referred to as **tax loopholes**. **Tax evasion**, however, is different as it involves:

- The *fraudulent* misreporting of transactions (e.g., all income is not reported or fictitious deductions are reported).
- The fraudulent structuring of transactions for the *sole purpose* of tax avoidance, without any other business or economic purpose.

When tax evasion occurs, appropriate financial and legal penalties are imposed by the IRS.

Lowering Your Tax Base

Because your tax base directly affects the amount of taxes you pay, your best tax-planning strategy is to lower your tax base. To do this, you first need to understand the difference between realized versus recognized income.

Realized versus Recognized Income

When you get paid at work, you have realized income. **Realized income** occurs each time you convert one asset into a different one for a gain, such as:

- Converting your human capital into a paycheck.
- Converting a coin collection into cash by selling it.
- Converting good grades in school into a scholarship that pays your tuition and fees.
- Selling your home that you own and live in that has increased in value.

HELPFUL HINT

Scholarships for tuition and fees are an example of realizing income in the form of a scholarship but not recognizing that income on a tax return; scholarship income for tuition is exempt from taxation.

Generally, the IRS requires that realized income be recognized as gross income on your tax return. **Recognized income** occurs when realized income is reported and taxed (see **Helpful Hint**).

- Tax-avoidance strategies allow you to realize income without having to recognize the income for taxes.
- This can be accomplished through tax deductions or exemptions and by creating tax-exempt sources of income.

Consider the following example. Yeti is a first-year student in college. She received excellent grades in high school and aggressively applied for scholarships. Yeti received a scholarship, totaling $15,000, that covered her tuition, fees, and books for one year. Additionally, Yeti received smaller private cash scholarships from local community organizations totaling $2,500, which she used for her meal plan. **Illustration 4.6.1** shows how Yeti realized $17,500 of income but only had to recognize $2,500 of income on her tax return.

In contrast, Rafael is also attending school as a first-year student. He works as a waiter at a restaurant earning money to pay his tuition and school expenses. He is paid $17,500 in wages and tips during the year, which he is required by law to report on his tax return. As Illustration 4.6.1 shows, not only is Rafael working more than Yeti, he also must report more income on his tax return.

ILLUSTRATION 4.6.1

Comparing Realized and Recognized Income

Tax Advantages of Employee Benefits

Another great way to avoid taxes, by not recognizing the income, is through the use of employee benefits. One example of an employee benefit that lets you recognize less income is an employer-sponsored retirement plan. Here's how a retirement plan works.

- Your employer offers all employees a retirement savings plan option.
- You save 10% of your pay in the retirement plan to build wealth for your future. Examples include a 401(k), 403(b), or 457 plan.
- Money saved in your employer's retirement plan is not recognized as income until it is taken out of the plan, many years in the future.
- If you were paid $55,000 a year and saved 10% of your pay into your employer's retirement plan, your realized income would be $55,000, but you would only have to recognize $49,500 of income on your tax return (remember, you put $5,500 into the retirement plan).

You can see from **Illustration 4.6.2** that your income, combined with the amount you contributed to your retirement plan, is $1,090 higher than it would be if you were to simply recognize all your realized income and not save for retirement. Thus, the actual cost of the $5,500 retirement contribution is only $4,410 (see **Helpful Hint**).

Saving for retirement is not the only way to manage your tax situation. You can also recognize less income by participating in any employer-sponsored employee benefit plans, including a cafeteria plan, a flexible spending account plan, a dependent care plan, or a health savings account plan.

HELPFUL HINT

If you did not have an employer-sponsored retirement plan, you could achieve a similar result by contributing to an individual retirement account (IRA) and then claiming a FOR AGI deduction for the contribution.

ILLUSTRATION 4.6.2

How Saving for Retirement Can Help You Avoid Recognizing Income

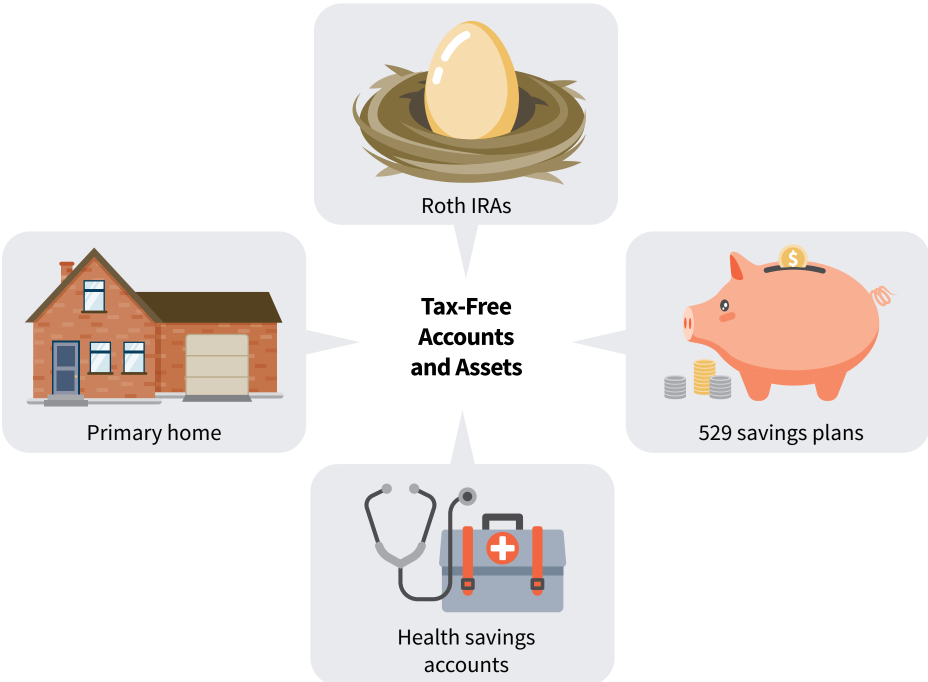
	No Retirement Plan Contributions	With Retirement Plan Contributions
Realized income	$ 55,000.00	$ 55,000.00
Retirement savings contribution	$ 0.00	($5,500.00)
Recognized income	$ 55,000.00	$ 49,500.00
Adjusted gross income	$ 55,000.00	$ 49,500.00
Standard deduction	($12,000.00)	($12,000.00)
Taxable income	$ 43,000.00	$ 37,500.00
Tax	$ 5,399.50	$ 4,309.50
After-tax income	$ 49,600.50	$ 45,190.50
After-tax income plus savings	**$49,600.50**	**$50,690.50**

Tax-Exempt Income

Another way to realize income without having to recognize it on your tax return is to invest in or contribute to accounts (and sometimes assets) that allow you to build wealth while avoiding taxes on the wealth accumulation. Often, the money accumulated in these accounts must be used for a specific purpose, like retirement (your nest egg), health care, or college education expenses. **Illustration 4.6.3** shows accounts that can produce tax-free income, if withdrawals from these accounts meet certain requirements enforced by the IRS.

ILLUSTRATION 4.6.3

Accounts and Assets That Can Produce Tax-Free Income and Wealth



Roth IRAs

A **Roth IRA** is a retirement savings account that you contribute money to and then use to purchase investments. Here's what you need to know about a Roth IRA:

- You must have earned income to contribute to a Roth IRA.
- You will not receive a tax deduction for contributing to a Roth IRA, but all the appreciation in the value of the investments held in the account will be tax-exempt if two conditions are met.
  1. You have held the account for more than 5 years.
  2. You are at least 59½ years old when you take the money out.

You may want to pay tax now on your retirement savings by contributing to a Roth IRA or Roth 401(k) or 403(b) retirement plans. By paying the tax now (i.e., not receiving a deduction for the contribution to the plan), you will be able to withdraw the money tax-free in retirement if certain requirements are met. Tax-free retirement income in the future may be a much better option than a current tax deduction. We discuss Roth IRAs in greater detail in a later chapter.

Other Sources of Tax-Exempt Income

Another example of tax-exempt income is the gain on the sale of your primary residence. If you have owned and lived in your home for 2 out of the past 5 years and sell it for a profit, the first $500,000 in gain is exempt from taxation for married tax filers or $250,000 for single filers. Other tax-exempt income sources include:

- Municipal bond interest.
- Qualified distributions from 529 college savings plans.
- Distributions from health savings accounts used for qualifying health care expenditures.

Tax-Deferred Growth

If you have investments, you should consider a tax strategy of letting the assets appreciate in value over long periods of time before realizing the gains.

- This strategy is referred to as maximizing **tax-deferred growth**.
- If you hold an investment for more than 1 year, any gain you receive on the sale will qualify for lower, long-term capital gains tax rates.
- Additionally, this strategy will allow you to only pay taxes on the gain one time.

Many different types of investments have the potential to increase in value over time (we will discuss some of these investment alternatives in later chapters). In the meantime, look at **Illustration 4.6.4**. This chart shows the growth of an asset taxed annually (at 25%) compared to the growth of a similar asset taxed once (at 15%) at the end of 15 years. As you can see, the power of tax-deferred growth can be quite impressive.

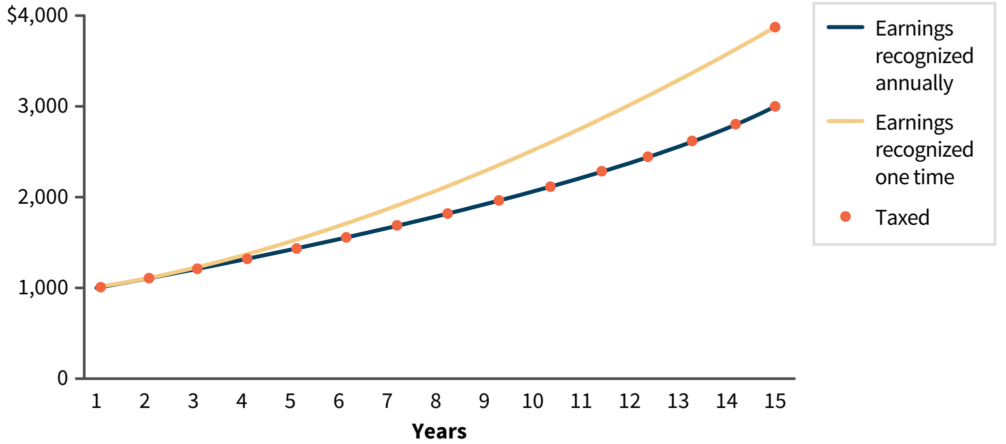


ILLUSTRATION 4.6.4

Comparison of Annual Recognition of Earnings with One-Time Recognition of Earnings

Importance of Tax Knowledge and Organization

According to the IRS, many taxpayers miss out on claiming deductions and credits worth billions of dollars in tax savings each year. Two common reasons for missing these tax savings are:

1. Taxpayers are not aware of certain deductions and credits.
2. Taxpayers do not keep adequate records of their expenditures in order to claim the deductions.

Know the Tax Laws

Many taxpayers do not understand U.S. tax law well enough to realize that they may qualify for refundable tax credits. For example, recall the Earned Income Credit.

- Some individuals who qualify for the Earned Income Credit never file a tax return.

- In one study, the IRS estimated that taxpayers forego up to $3.4 billion annually in Earned Income Credit refunds.

Regardless of your income, the best course of action you can take is to file a tax return, even if you are not required to do so. If a return has not been filed, you have 3 years from the original due date to file one. By going through the process of completing a tax return (tax-preparation software makes this easy), you might just discover that you qualify for a refund!

Know What Records to Keep

Many taxpayers lose out on significant tax savings because of poor record-keeping. This is particularly true for individuals who are considered self-employed. Self-employed individuals benefit the most from business-related deductions because the deductions reduce both income tax liability and self-employment tax liability. However, everyone should keep track of expenses that could potentially be deductible. **Illustration 4.6.5** lists some common records you should keep for tax purposes (see **Helpful Hint**).

HELPFUL HINT

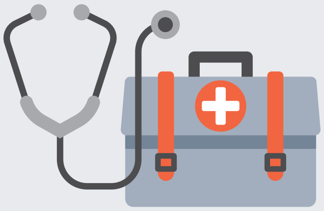
Generally, it is a good idea to keep tax records for around 7 years.

ILLUSTRATION 4.6.5

Tracking Common Deductions

Education-Related Expenses

- Tuition and fees paid.
- Book and course supply expenses.
- Other required expenses for school.
- Statement for student loan interest paid.



Health-Related Expenses

- Premiums for a health insurance plan that is *not* purchased as an employee benefit.
- Co-payments, deductibles, prescriptions, and any doctor-prescribed purchases.
- Mileage to and from health-care offices (e.g., doctor or pharmacy).

Self-Employment-Related Expenses

- Miles driven in your personal car for work-related purposes.
- Any licensing, testing, study material, or other fees associated with your work.
- Special tools, unique clothing (e.g., adventure-guide gear), or other equipment purchased by the self-employed person.

To claim a deduction, you must be able to substantiate (prove) the associated expense by knowing the following for each separate item purchased.

- The cost and date of the purchase.
- A description of the purchase.
- The business purpose for the expenditure.
- A receipt showing the purchase.

Perhaps the most common deduction available to self-employed individuals is the **standard mileage rate** deduction. This deduction (in 2018), shown in **Illustration 4.6.6**, can be used for miles driven associated with business, medical, moving, and charitable activities.

Business-Related Mileage Rate	Medical or Moving Mileage Rate	Charitable Activities Mileage Rate
$0.545 per mile	$0.18 per mile	$0.14 per mile

ILLUSTRATION 4.6.6

Standard Mileage Rate for Various Activities

For example, say your marginal tax rate is 15% and you drive 5,000 miles for the year in your personal car as an independent contractor.

- Your mileage deduction will be $2,725 (5,000 × $0.545).
- This business deduction will lower your taxable income, as well as your income subject to self-employment taxes (15.3%).
- Thus, you will save $743.93 [($2,725 × 12% marginal tax rate) + ($2,725 × 15.3% self-employment tax)] in taxes by keeping track of your mileage.

To claim the standard mileage rate deduction, you will need to maintain a written (or electronic) log of your business trips including the date, how far you drove, the purpose of the trip, and where you drove (see **Helpful Hint**). Keep in mind, however, that typical daily driving activities do not qualify for a deduction. You usually need to be self-employed or use your vehicle for a medical or charitable purpose to qualify for a tax deduction.

HELPFUL HINT

Smartphone apps are available to help keep track of tax-deductible receipts and mileage. Some of these apps will recognize when you are driving in your car and automatically track the mileage and then prompt you for the purpose of the trip to know whether it is for business or personal use.

Concepts in Action

Susi is a junior in college and works part-time. She paid for tuition, fees, books, and classroom supplies. She is an independent contractor working as a dental hygienist for two different dental offices. What records should Susi keep for tax purposes?

Solution

Susi's school will give her a statement, usually in January, outlining how much she paid for tuition and fees during the year. Susi needs to keep track of how much she paid for books and classroom supplies. Also, because Susi is an independent contractor, she should be keeping track of the mileage she is driving from her apartment to the dental offices or from school to work and then back home again (because her home is her "office"). She should also keep track of any training she has to pay for to maintain her job skills as a dental hygienist. If she is purchasing any health insurance for herself, then she should also keep track of the premiums she pays. As mentioned, Susi may want to consider using a mileage tracking app.

End-of-Topic Assessment

Multiple-Choice Questions

1. Tax avoidance is:
   - **a.** legal and expected of taxpayers.
   - **b.** illegal and will be prosecuted.
   - **c.** structuring transactions so that taxes are minimized.
   - **d.** both legal and expected of taxpayers and structuring transactions so that taxes are minimized.
2. Tax evasion is:
   - **a.** legal and expected of taxpayers.
   - **b.** underreporting recognizable income.
   - **c.** structuring transactions with economic substance to avoid taxes.
   - **d.** underreporting frivolous deductions.
3. What is the difference between realized and recognized income?
   - **a.** Realized income is when it is reported on the tax return, and recognized income is when an asset is converted into another asset for a gain.
   - **b.** Realized income occurs when money is earned, and recognized income is when realized income is taxed.
   - **c.** Realized and recognized income are the same thing; one is just an accounting term and the other is a tax term.
   - **d.** Realized income is taxable in a future tax period, and recognized income is taxable in the current tax period.
4. Not recognizing realized income is a(n):
   - **a.** form of tax evasion unless Congress has specifically allowed it.

b. effective tax-planning strategy.

c. form of tax avoidance.

d. form of tax avoidance, an effective tax-planning strategy, and a form of tax evasion unless Congress has specifically allowed it.

5. Which of the following statements is *true*?

a. Individuals who save in an employer-sponsored retirement plan will have greater after-tax income and wealth than those who do not save in this plan.

b. Employer-sponsored savings plans are beneficial because the employer pays the taxes on the money contributed to retirement savings.

c. Employees must earn a minimum amount from their employer before they can contribute to the retirement plan.

d. Only retirement plans through work provide tax savings.

6. Traditional IRAs may allow you to achieve which of the following?

I. Tax-free distributions.

II. Tax-deferred growth.

III. Reduced current taxable income.

a. I and II.

b. I, II, and III.

c. I only.

d. II and III only.

7. Roth IRAs may allow you to achieve which of the following?

I. Tax-free distributions.

II. Tax-deferred growth.

III. Reduced current taxable income.

a. I and II.

b. I, II, and III.

c. I only.

d. II and III only.

8. Tax-planning activities take advantage of which of the following?

a. Tax loopholes.

b. Tax evasion.

c. Tax deferral.

d. Tax loopholes and tax deferral.

9. John is self-employed and uses his car for work. For John to claim a deduction based on the miles he drives his car, what must he do?

I. Use his car only for work.

II. Keep a written log showing the date, mileage, location, and purpose of each trip.

III. Keep track of all gas, repair, maintenance, and other expenses.

a. I only.

b. II only.

c. III only.

d. I and III only.

10. **Calculate** Janet is self-employed and drove her car 2,500 miles for work this past year. Assuming Janet has kept proper records of her mileage, what would be Janet's standard mileage deduction?

a. $1,362.50.

b. $202.50.

c. $2,500.00.

d. $375.00.

Adventures in Personal Finance

Short Answer

1. The American Opportunity Credit requires taxpayers to determine their "qualified expenses." What types of records should you keep in order to claim the American Opportunity Credit? (*Hint:* Use *IRS Publication 970 Tax Benefits for Education* to identify these items.)

2. What would be the best way to substantiate how much tuition you paid or the amount you spent on books for class?

3. Are there certain things that you are not currently keeping track of but should be to help lower your tax liability or increase your refund at tax time? List those items and identify how you will keep better track of those records.

Explore

1. Do an Internet search for the best app for self-employed individuals to keep track of their mileage. Is the app free? If there was a cost for such an app, how much would you be willing to pay for it?

2. **Writing** Find a family member, friend, or other individual who files taxes as self-employed. Find out how he or she substantiates and keeps track of deductible expenses. Write a one-page summary of what you learned from your discussion about his or her record-keeping methodology.

Expanded Learning Activity

Based on your monthly budget developed in previous chapters, determine whether any of your routine expenditures are tax-deductible or enable you to claim a tax credit. Identify the IRS publication to learn more about the appropriate deduction or credit. How much could you save in taxes by claiming the deduction or credit? What additional record-keeping do you need to claim the full value of the deduction or credit?

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

4.1 Explain the purpose and types of taxes. Taxes are financial obligations imposed on individuals and businesses by government entities. There are many different types of tax systems; however, the basic tax formula is the tax base multiplied by the tax rate. No matter what your personal view on taxation is, your financial future will be affected by taxes. The overall goal of tax planning is not to avoid paying any taxes but rather to maximize your after-tax wealth.

4.2 Describe how to calculate taxable income. Deductions have a significant impact on an individual's tax base, or taxable income. Whether you are claimed on your parents' tax return, or you claim yourself on your tax return, may have a significant effect on your tax return. Managing your deductions will help you minimize your tax base and therefore minimize the tax that you owe. Although taxes may seem complex at first, the IRS has tried to simplify filing a tax return by using standardized forms to report income and deductions.

4.3 Describe how to calculate marginal and effective tax rates on income and capital assets. Although everyone starts out with a tax rate of 10%, many people end up paying a much higher tax rate on their last dollar earned. The tax rates that individuals end up being subject to are based on three things: the type of income earned, the filing status, and the amount of the tax base. Long-term capital gains and qualifying dividends are subject to relatively low tax rates; other forms of income, such as wages and salaries, are subject to higher tax rates. Additionally, if you file your tax return as married filing jointly, then more of your household income is taxed at lower rates compared to those individuals who file as single. All of this means that two individuals can have different marginal tax rates and effective tax rates even though they have similar gross income.

4.4 Discuss how federal income tax credits for education, health insurance, and households with children can help to lower income taxes. The U.S. federal income tax system is much more than a way to generate revenue for the federal government. Many social welfare initiatives are embedded in the tax code to target different populations. These social initiatives in the tax code most often take the form of refundable and nonrefundable tax credits. Refundable tax credits can make it so that the federal government pays you to file your tax return. You were introduced to refundable tax credits related to education, health insurance, and dependent children. These refundable tax credits mean that many households in the United States end up getting more money back from the federal government than they paid in taxes during the year. There are numerous other nonrefundable credits that can eliminate an individual's tax liability but will not create a refund.

4.5 Explain how to apply Medicare and Social Security taxes to self-employed individuals. Whether by choice or circumstance, many people find themselves taxed as self-employed individuals. Self-employment tax is in addition to regular income taxes and is the equivalent of payroll taxes for employers and employees. Self-employed individuals are required to pay estimated taxes for income and self-employment tax on a quarterly basis (i.e., four times per year). Self-employment and FICA taxes are the primary sources of revenue for the Social Security and Medicare systems. If you are self-employed, good record-keeping is essential to reduce both your income tax liability as well as your self-employment tax liability.

4.6 Identify income tax-planning strategies to minimize taxes and maximize after-tax wealth. There are simple things you can do to avoid paying more taxes than are necessary. By understanding how to realize income without having to recognize that income on your tax return, you are well on your way to maximizing your after-tax wealth. Some simple and effective strategies include using tax-advantaged retirement savings vehicles like Roth IRAs, traditional IRAs, and employer-sponsored retirement plans. You can also take advantage of the lower tax rates associated with long-term capital gains by holding your investments for longer periods of time (at least longer than a year). Finally, the importance of keeping good records is also essential to claiming deductions that can significantly reduce your taxable income.

Continuing Case: Tarek's Financial Journey

Tarek's job is going great, and this past year he decided to work part-time so that he could go to school full-time for his master's degree. Tarek went to a highly ranked school, where tuition and fees were $15,000 for the year. He paid for his tuition and fees using a combination of savings, current income, scholarships, employer-provided tuition assistance, and student loans. It is the end of the year, and Tarek is filing his tax return. His total income and benefits are as follows:

- Wages: $30,000 (as reported on his W-2).
- Employer-provided tuition assistance: $5,000.
- Scholarship: $2,000.
- Student loan proceeds: $5,000.

In addition to tuition, Tarek had the following expenditures:

- Student loan interest: $1,000 (as reported to Tarek by his lender on Form 1098-E).
- Books: $1,000.
- Rent: $8,000.
- Federal income taxes withheld: $4,000 (as reported on his W-2).

It is now time for Tarek to complete his tax return. Tarek is single and is 26 years old.

Instructions

(You may also want to reference *IRS Publication 970*.)

a. What is Tarek's filing status and standard deduction amount for the tax year?

b. Which of the following income items, and what amount, are reported on Tarek's Form 1040 tax return?

1. Wages.
2. Employer-provided tuition assistance.
3. Scholarship.
4. Student loan proceeds.

c. What education tax credits is Tarek eligible to claim?

d. For each of the following expenses, indicate whether Tarek can claim a deduction and, if so, the amount of the deduction.

1. Student loan interest paid.
2. Books.
3. Rent.

e. Calculate Tarek's tax liability using Form 1040. Be sure to account for federal income taxes withheld.

Calculating the Cost of Life's Financial Journey

In this chapter, you learned the importance of tax avoidance. One of the simplest tax avoidance strategies is to contribute to a Roth IRA, although this may not be right for everyone. Some individuals, particularly low-income households that may be eligible for tax credits because of young children in the home, may benefit more from contributions to a traditional IRA. Here, you want to help Paula identify the best retirement savings option for her situation.

Paula is 25, single, and makes $40,000 a year. Paula does not have access to an employer-sponsored retirement plan, but she really wants to start saving for retirement. She can contribute $5,000 of pretax money to a traditional IRA, or she can contribute $4,400 of after-tax money to a Roth IRA. The $600 difference represents the tax that Paula has to pay. Assume Paula continues to make this same annual contribution for 30 years and earns 9% on her investment.

Instructions

a. Assuming that Paula continues to save aggressively for retirement and accumulates enough retirement wealth so that she will be in the 22% tax bracket in retirement, which option is better for Paula, a traditional IRA or Roth IRA?

b. Use the time value of money (TVM) formulas to calculate what the future value will be and how much she will have after taxes are paid in retirement by completing the following table.

	Traditional IRA	Roth IRA
Money available to save	$5,000	$5,000
Tax on money available to save	$ 0	$ 600
Net annual contributions	$5,000	$4,400
Number of years contributions are made	30	30
Future value at 9%	?	?
Retirement tax rate	22%	0%, qualified Roth IRA distributions are tax-free
Tax	?	?
After-tax wealth	?	?

Planning for the Future

Ashley is a junior at State College. To offset the cost of attending college full-time, Ashley has a part-time job. During the tax year, Ashley earned $9,000. Her parents also provided some support for her and claimed her on their tax return. During the tax year, Ashley paid $3,000 of her tuition bill and her parents paid $3,000. Ashley also paid for her own books, which cost $500. Her parents helped her by paying part of her rent and grocery bills. After reading about refundable tax credits, Ashley realized that she, or her parents, were eligible to claim the American Opportunity Credit.

Instructions

a. What is Ashley's filing status, standard deduction amount, and taxable income for the year? Remember that she is claimed on her parents' tax return.

b. How much tax will be assessed to Ashely based on her taxable income calculated in part a?

c. If Ashley were to be able to claim the American Opportunity Credit, how much would the refundable and nonrefundable portions of the credit total? Can Ashley claim the American Opportunity Credit?

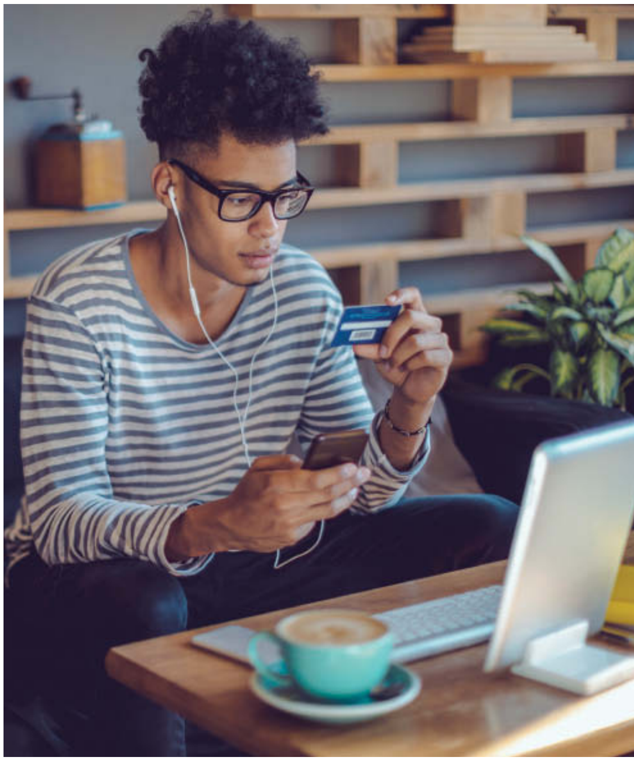
d. If Ashley's parents were to be able to claim the American Opportunity Credit, how much would the refundable and nonrefundable portions of the credit total? Assume that Ashley's parents have an assessed tax of $5,000. Can Ashley's parents claim the American Opportunity Credit?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER **5**

Checking Accounts, Credit Scores, and Credit Cards


Eva-Katalin/E+/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

5.1 Explain the development and purpose of checks and checking accounts.

5.2 Identify the differences and similarities among debit cards, prepaid cards, electronic transfers, and checking accounts.

5.3 Determine the costs associated with borrowing money.

5.4 Know the purpose of a credit report.

5.5 Describe how credit scores are developed, calculated, and used.

5.6 Explain the role of credit cards as a financial-management tool.

An important task along your financial journey involves learning about and using tools and techniques to become a better consumer. In this chapter, you will be exposed to some strategies that you can use to better manage how you pay for things. In addition to learning about the importance of checking accounts, the use of debit cards, and how to manage your credit card use, you will also learn about credit reports and credit scores.

Credit Cards: Tools or Trouble?

You may not realize it, but your current spending behavior reflects your perception of risk. Some people are so fearful of losing control of their spending that they refuse to use financial tools that can help them improve their financial situation. Others don't fully grasp the negative outcomes associated with the misuse of some financial tools. In either case, perceptions may not always reflect factual information. Rather than fall into one of the extremes—fearful or fearless—it's better to seek out information that can shed light on your own perceptions of what is risky. Doing so will improve your decision-making skills.

Let's see how this works out in practice. The following questionnaire was designed to be a fun way to help you understand your perception of credit cards—a topic covered in detail later

in this chapter. This isn't a quiz, so there are no "correct" answers to worry about. All you need to do is mark the word choices that you most closely associate with credit cards. Go ahead and give it a try!

What Do You Think About Credit Cards?

Column A		Column B	
Freedom	☐	Debt	☐
Fun	☐	Boring	☐
Safe	☐	Identify theft	☐
Convenient	☐	Hassle	☐
Rewards	☐	High interest rates	☐
Necessary	☐	Wasteful	☐
Calm	☐	Scary	☐
Buying power	☐	Overspending	☐
Total: ______		**Total:** ______	

Now that you've finished, add up the total number of marks in Column A and Column B. If you have more marks in Column A, you probably think of credit cards as a worthwhile financial tool. If you have more marks in Column B, you are likely a bit apprehensive about credit cards.

Regardless of your current perception of credit cards, you'll find this chapter helpful with managing your purchasing decisions and financial resources. By the way, if you have a negative perception about credit cards right now, that may change after working through this chapter. It turns out that once you know how to use credit cards wisely, you'll realize that they can be an efficient way both to manage your spending and make purchases more convenient and safe.

Checking Accounts: The Basics

LO 5.1 Explain the development and purpose of checks and checking accounts.

Imagine being transported back to medieval times (AD 476–1450). As you walk through the local marketplace, a merchant entices you to purchase something expensive. After a bit of negotiation, you and the merchant decide on a final price. How do you pay for the item? Because this is the era of the coin, merchants expect to be paid in silver and gold. However, not only is it a burden to carry coinage, but those who are unwise when transporting their money often fall victim to thieves.

In Europe, things began to change in favor of consumers around AD 1400, when checks were introduced into the banking system. Concepts similar to checking were also evolving in other regions of the world during medieval times. Today, now more than ever, checking accounts are essential for your financial journey, even though you may never write a check. The reason is that checking accounts are used to access the electronic payment world. Whether you prefer to use a debit card to make a purchase or a smartphone app to transfer money to a friend, both rely on a checking account. Knowing the basics of checking accounts will help you understand these other transaction methods.

Overview of Checks

Form of Checks

A **check** is simply a written order to a bank to pay a third party (payee). Technically, your check can be written on anything, but checks generally tend to be uniform in design. And as strange as it may seem, physical checks have changed very little over the centuries. **Illustration 5.1.1** shows what a typical check looks like today. Three elements are required when you write a check:

1. The name of the person or company that gets the money (the payee).
2. The date.
3. The amount to be paid. The amount needs to be recorded both in numerical and written form.

It is possible to make a check payable to “Cash” instead of a person or company, but be aware that once you do this, anyone who comes into possession of the check can cash it.

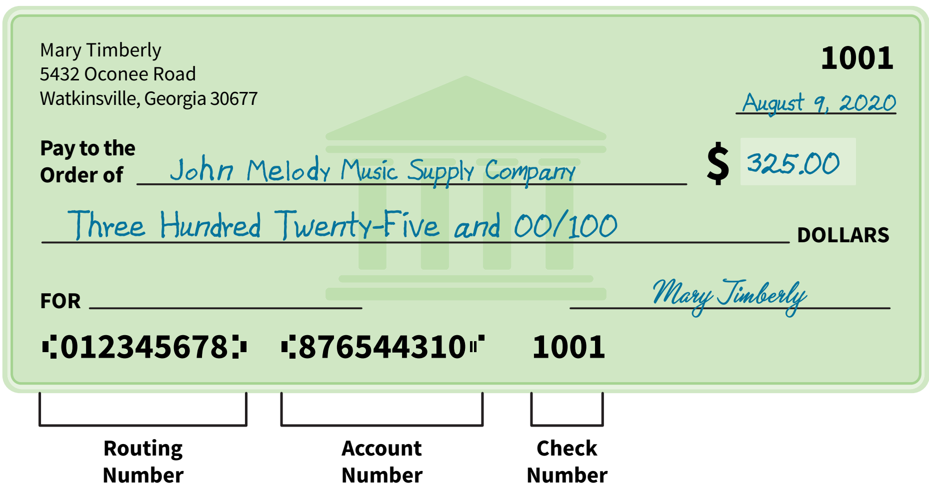


ILLUSTRATION 5.1.1

Sample Check

The Federal Reserve Act of 1913 set in motion the creation of a national system where a check written in one city at one bank could be cashed in another city at another bank. This system

was made possible by **bank routing numbers** (the nine-digit code on the lower left of the check), which in combination with a bank account number act as a payment trail for transferred funds (see **Helpful Hint**).

HELPFUL HINT

When linking your checking account with online or other electronic payment tools, you'll need to know your routing number and account number. These can be found on a check or obtained from your bank.

Check Alternatives

What started out as a simplified means of doing business in local towns has turned into the foundation for nearly all local, national, and international consumer-based transactions, including the use of debit cards. It's hard to imagine living, working, and interacting in the marketplace without a checking account (most debit cards are tied to a checking account) (see **Helpful Hint**). Approximately 92% of Americans have a checking account, but that means 8% of Americans conduct business on a daily basis without one. These consumers are forced to use some other form of payment, such as the following:

HELPFUL HINT

Check alternatives are rapidly being replaced by electronic payments, which are more secure.

- **Money order:** A prepaid check purchased from a bank, credit union, or convenience or grocery store.
- **Certified check:** A personal check issued by a bank that guarantees the amount will be paid; the bank charges a fee for this type of check.
- **Cashier's check:** A check of a bank or other financial institution that can be purchased by paying the amount of the check plus a service fee.
- **Traveler's check:** A prepaid check purchased from a credit card company, bank, or credit union that must be signed before it can be cashed. (Note that worldwide electronic payment systems are making traveler's checks obsolete.)

Most people without a checking account, however, use cash for most purchases, which is eerily similar to how people lived in medieval times!

Cashing a Check

Fewer and fewer people today write checks. In fact, many college-age students may never write a check in their lives! Instead, they make purchases using debit cards and electronic transfers. On the other hand, nearly everyone will need to cash a check from time to time. Although you can certainly use a check-cashing service—generally not recommended because of high costs—a better option is to cash a check at the bank or credit union where you have an account (see **Helpful Hint**).

HELPFUL HINT

Banks and credit unions offer similar services and products. The primary difference is that credit unions work on a non-profit basis, whereas banks are for-profit institutions. Banks tend to offer a broader line of services as well.

Before you can cash a check—which means to receive money from the bank for the amount of the check—you must first endorse it. An **endorsement** is just your signature. Three types of endorsements are common:

1. **Blank endorsement:** Your name signed on the back of the check. Once you have signed the check, anyone can cash it; so be careful and sign the check only at the time you plan to deposit or cash it. Example: John Melody.
2. **Special endorsement:** A way to transfer the amount of the check to someone else. Example: You could write the following on the back of the check: Pay to the Order of Mike Smith, John Melody.
3. **Restricted endorsement:** A way to sign your check and ensure that it gets deposited into your account. Example: For Deposit Only (1357902468), Oconee City Bank, John Melody.

Opening and Using a Checking Account

Advantages of a Checking Account

It goes almost without saying that you *must* have a checking account to continue your lifetime financial journey. Here are four reasons why:

1. **Liquidity:** A quick and easy way to access cash. Checking accounts provide a baseline level of liquidity; however, they generally pay low or no interest on deposits.

2. **Direct deposit of paychecks:** A way for an employer to transfer your earnings directly to your bank or credit union account. This not only saves time, it also eliminates the need to cash your paycheck. Remember, check-cashing services outside financial institutions are costly (see **Helpful Hint**).
3. **FDIC insurance:** A protection of all deposits up to at least $250,000 in case the bank fails or goes out of business.
4. **Debit cards:** The way to obtain one is to have a checking account. A debit card acts as an electronic version of a check. (We discuss debit cards in another topic.)

If you don't have a checking account yet or even if you do, you should shop around for the one that best fits your needs. By law, if a checking account is described as "free" or "no cost," you can't be asked to pay a monthly service fee or a fee for exceeding a specified number of transactions, or any fee to make a deposit, withdraw, or transfer money. Even so, financial institutions can still charge for the use of an automated teller machine (ATM), overdraft fees, bounced check fees, balance inquiry fees, fees to stop payment on a check, fees on an inactive account, and check-printing fees (see **Helpful Hint**). Some financial institutions charge a fee to cash a check from another bank or credit union; these institutions should be avoided. **The New York City Office of Financial Empowerment** says you should look for the following in a checking account:

- Reasonable monthly fee or **service charge**. You should avoid paying a checking account service fee. There are many free checking accounts available if you are willing to look for them.
- No monthly fees for the use of a debit card tied to your checking account.
- Free use of in-network ATMs with your debit card.
- Low minimum balance requirements. Banks and credit unions typically require that you hold a minimum monthly balance. Look for an account that requires no minimum (which is common for student accounts) or a smaller dollar ($100) minimum.
- Accounts that allow unlimited withdrawals and checks on a monthly basis.
- Availability and cost of safe deposit boxes.

HELPFUL HINT

More information about opening and managing a checking account, making deposits, and online banking is readily available on the Internet, such as the website offered by New York's Department of Financial Services.

HELPFUL HINT

If you use ATMs, be sure the bank or credit union you choose has a large network of ATMs in your area.

Checking Account Warnings

Although having a checking account opens up new ways to spend money, you need to be careful. For example, nearly all banks belong to **ChexSystems®**. This network of member financial institutions reports information on closed checking and savings accounts. Before opening an account for you, banks and credit unions use ChexSystems to evaluate your previous bank account history. If you have mismanaged an account in the past, you may find that either you can no longer open a new account or may be subject to higher fees and restrictions.

Common red flags within ChexSystems include allowing an account balance to go to zero and bouncing a check.

- **Bouncing a check** refers to writing a check for an amount greater than your account balance (this is also known as an **overdraft** or **non-sufficient funds**). Another name for this is **writing a bad check**. Not only is this embarrassing, it is also against the law in most states.
- When this happens, the person trying to cash your check will be denied access to the promised payment. Sometimes, your bank will pay the amount of the check, but it will then turn around and charge you a hefty **overdraft fee**, which is a penalty assessed by the bank.
- Banks receive billions of dollars each year in overdraft fees. These fees, however, can easily be avoided by bank customers through regular tracking (daily or weekly) of cash coming into and going out of their accounts.

Know Before You Spend

One of the most important things you can do to minimize fees on checking accounts is to avoid withdrawing more money than is in the account. Overdraft fees can add up quickly and be very costly. Perhaps the easiest way to monitor your checking account balance is to use both online banking services from your bank or credit union and a mobile banking application.

- These services will allow you to monitor your checking account transactions and balance at any moment.
- Online and mobile banking services should be provided to you at no charge and can help you monitor everything that is happening with your checking account.
- Many banks offer several additional free services through online banking, such as electronic check writing, bill payment services, and access to your current credit score (discussed in a later section).

Your bank or credit union knows a great deal about your transactions, but one thing it does not know is the amount of any checks you have written that have not yet been cashed. Outstanding checks can create headaches when trying to determine how much you have available to spend in your checking account. To reduce this headache:

- Many people only use online bank payment services and other electronic payment forms so that payments are immediately reflected in their checking account balance.
- Some individuals will maintain a check register and record each check written and electronic transaction occurring in the checking account.
- Using a check register in combination with writing physical checks and using electronic transactions allows you to accurately monitor the checking account balance and avoid overdrawing the account.

If you do not have access to online banking services or mobile banking applications or choose not to use these services, then it is very important that you reconcile your check register with your checking account statements on a regular basis.

Reconciling a Checking Account

A **checking account reconciliation** is simply the process of comparing your check or debit card register with your monthly bank statement. **Illustration 5.1.2** shows the check register for Mary Timberly (the E and A shown in the register will be reviewed later in this discussion).

As shown, the check register is where Mary records all the transactions in her account, including deposits, debit-card transactions, service fees, and payments by check. At the end of September, Mary's check register indicates that she has $1,606.25 in her account.

ILLUSTRATION 5.1.2

Mary's Check Register

Check Number	Date	Payee/Description	Payment (–)	Deposit (+)	Balance	
		Starting balance			$2,045.75	
1230	9/2	Community electric/utilities	$200.00		$1,845.75	
1231	9/4	Pat's Store/groceries	$90.00		$1,755.75	
	9/5	Paycheck		$268.00	$2,023.75	
	9/7	Cash (ATM)	$25.00		$1,998.75	
1232	9/9	Smith and Morris books/magazines	$37.50		$1,961.25	
	9/13	Cash (ATM)	$35.00		$1,926.25	
	9/20	Cash (ATM)	$20.00		$1,906.25	
	9/23	Paycheck		$200.00	$2,106.25	E
	9/27	Cash (ATM)	$50.00		$2,065.25	
1233	9/28	TJ Apartments, Inc./rent	$450.00		**$1,606.25**	A

Note that during the month, Mary wrote four checks, made four cash withdrawals, and recorded two paychecks.

- When Mary wrote a check, she recorded the check number, date, payee, a brief description, and the amount.
- Mary also indicated when she used her ATM card to withdraw cash or when she received direct-deposited paychecks (note that these types of transactions do not have check numbers).
- After each recorded transaction, Mary then added or subtracted the amount to keep her checking account balance up to date.

However, when Mary received her monthly account statement from the bank (**Illustration 5.1.3**), it indicated that she had $1,803 and not $1,606.25 as she thought (the B, C, and D shown in the Illustration will be discussed in the next section). Why the difference? It's time for Mary to do a checking account reconciliation so that she does not bounce a check.

ILLUSTRATION 5.1.3

Mary's Monthly Account Summary

Account Number	Account Type	Balance
135790468	Student Checking	**$1,803.00**

Previous balance	$2,045.75	Statement due	9/1/20–9/30/20
2 deposits	$468.00	Days in statement period	30
3 checks	$577.50	Average balance	$1,924.38
4 debit card transactions	$130.00	APY earned	0.35%
Service charges	$4.00 B	2020 interest paid	$6.30
Interest paid	$0.75 C		
Current balance	$1,803.00 D		

Deposits and Other Credits	
9/5 Deposit	$268.00
9/23 Deposit	$200.00

Debits and Electronic Payments

Date	Check Number	Amount
9/4	1231	$90.00
9/7	Electronic	$25.00
9/9	1232	$37.50
9/13	Electronic	$35.00
9/20	Electronic	$20.00
9/27	Electronic	$50.00
9/28	1233	$450.00

Reconciliation Process

Illustration 5.1.4 shows the following steps that Mary follows to balance her checking account (these steps are also shown in Illustrations 5.1.2 and 5.1.3).

A Mary starts by finding her balance from her check register ($1,606.25).

B C Mary subtracts the monthly service charge ($4.00) and adds interest earned ($0.75). These do not show up in her check register because Mary only sees these items when the bank statement arrives.

D Mary compares the bank statement balance ($1,803) with her updated check register balance ($1,603).

E On closer review, she realizes that the check she wrote on September 2 for $200 (Check #1230) has not been cashed yet. Mary needs to subtract the $200 from the bank balance to arrive at the correct balance in her account.

ILLUSTRATION 5.1.4

Checking Account Reconciliation Example

Where to Look in Mary's Checkbook:		Where to Look in the Bank Statement:	
The last number in the check registry	A **$1,606.25** Mary's balance per register	The monthly account summary	D **$1,803.00** Mary's balance per bank statement
	–		–
The monthly account summary	B **$4.00** Less service charges	The check register	**$0.00** Deposits not shown on statement
	+		–
The monthly account summary	C **$0.75** Plus interest earned	The check register	E **$200.00** Checks outstanding (not yet cashed)
	=		=
Calculate	A – B + C **$1,603.00** Net checkbook balance	Calculate	D – E **$1,603.00** Net checkbook balance
$1,603.00	=	**$1,603.00**	

HELPFUL HINT

Banks that offer electronic check requests will include these on the bank statement as pending and deduct the amount from your balance.

As this example shows, if Mary had trusted the bank statement's balance, she might have bounced a check (or not been able to purchase items using her debit card), thinking she had more money than she really had (see **Helpful Hint**). Here is the takeaway: You need to know how much is in your checking account before you make a payment. Doing so will reduce costs and headaches in the future.

Concepts in Action

Your friend is in a panic! She just received her bank statement, which shows her balance to be $995. She is confused because her check register indicates that she has $900 in the account. In helping her reconcile her checking account, you found the following information in her bank statement:

- The monthly service charge was $15.
- No interest was earned.
- A $150 deposit was made.
- In total, she withdrew $80 from ATMs and was charged $7 in ATM fees.

What is your friend most likely forgetting as she reconciles her check register with the bank's monthly account summary?

Solution

The likely answer is that at least one of the checks she has written in the past has yet to be cashed. This is not uncommon as sometimes people forget to cash a check, or there is a delay that causes the bank statement to arrive just before a check clears. After adjusting for the monthly service charge, ATM fees, deposits, and withdrawals, it looks like your friend also has $47 in outstanding uncashed checks.

However, an important question to ask your friend is why is she paying so much in fees? She is currently paying over 2% of her net balance in service charges and fees ($22 ÷ $948). The monthly service fee and ATM fees are too high when she could get these services for free.

Checkbook balance	$900.00
Less: Service charges	–15.00
Less: ATM fees	–7.00
Plus: Interest earned	+0.00
Plus: Deposits	+150.00
Less: Withdrawals	–80.00
Net balance	$948.00
Balance from bank statement	$995.00
Plus: Deposits not shown on statement	+0.00
Less: Checks outstanding	**–47.00**
Reconciled balance	$948.00

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following is *not* required for a check to be valid?
   - **a.** Signature of the account holder.
   - **b.** Name of payee.
   - **c.** Account number.
   - **d.** Address of payee.

2. Physical checks require a number of elements to allow someone to cash a check issued by one bank at another bank. Which of the following is *not* part of the payment trail for transferred funds?
   - **a.** Bank routing number.
   - **b.** Account number.
   - **c.** Date of check.
   - **d.** Social Security number.

3. Xavier is purchasing a new car. The car dealership needs a $3,000 down payment before it will process a loan for the remaining balance. Xavier does not have a checking account, but he does have $3,000 in a savings account. He does not want to risk having the money stolen or lost on the way from the bank to the car dealership. What option could Xavier use to make the down payment that is both acceptable to the dealership while providing protection for Xavier?
   - **a.** Unfortunately, he does not have many choices other than to use cash.
   - **b.** He could use a certified check from his bank.
   - **c.** He could purchase a cashier's check made payable to "Cash."
   - **d.** Both using a certified check from his bank or purchasing a cashier's check made payable to "Cash" are acceptable.

4. Kaylee received a check from her grandmother. She wants to make sure that the check gets deposited into her account, so she endorses the check as follows: For Deposit Only, Account 7864389876, Kaylee Jones. This is an example of what type of endorsement?
   - **a.** Blank endorsement.
   - **b.** Special endorsement.
   - **c.** Restricted endorsement.
   - **d.** Certified endorsement.

5. When shopping for a checking account, it is important to compare banks and credit unions based on fees charged. All of the following are reasonable fees, *except:*
   - **a.** $5 monthly account fee for a nonstudent account holder.
   - **b.** $5 fee when account balance drops below $100 in a given month.
   - **c.** $3-per-transaction fee for in-network ATMs.
   - **d.** $0 fee for use of a debit card.

6. Banks close about five million checking accounts every year. It can be difficult for someone with a closed account to reestablish an account at a later time. All of the following factors are likely to prompt a bank or credit union to close a checking account, *except:*
   - **a.** writing bad checks.
   - **b.** being unable to pay an overdraft fee.
   - **c.** consistently mismanaging the account.
   - **d.** making several deposits and withdrawals every month.

7. Jorge opened a no-cost checking account at a local bank last month. He was surprised when he was charged several service fees. Under federal law, which of the following service fees is allowed in a no-cost checking account?
   - **a.** Withdrawal fee.
   - **b.** Service charge for excessive transactions.
   - **c.** Inactive account fee.
   - **d.** Money transfer fee.

Use the following check register for the month of April and the monthly account summary to answer Questions 8 and 9.

Check Register

Check #	Date	Payee/ Description	Payment	Deposit	Balance
					$700.00
93	4/02	Gas station/ groceries and gas	$57.00		$643.00
	4/08	Cash (ATM)	$50.00		$593.00
	4/15	Paycheck		$250.00	$843.00
94	4/18	P&T/groceries	$80.00		$763.00
	4/20	Cash (ATM)	$40.00		$723.00
95	4/25	WalStores/ video games	$35.00		$688.00
	4/28	Cash (ATM)	$30.00		$658.00
	4/30	Paycheck		$250.00	$908.00

Monthly Account Summary

Account Number	Account Type	Balance
1234567890	Student checking	$983.00

Previous balance	$700.00	Statement date	4/1 – 4/30
2 deposits	$500.00	Days in statement period	30
2 checks	$92.00	Average balance	$730.00
3 debit-card transactions	$120.00	APY earned	0.00%
Service charges	$5.00	2020 interest paid	$0.00
Interest paid	$0.00		
Current balance	$983.00		

Deposits and Other Credits	
4/15 Deposit	$250.00
4/30 Deposit	$250.00

(*continues*)

Debits and Electronic Payments

Date	Check Number	Amount
4/02	93	$57.00
4/08	Electronic	$50.00
4/20	Electronic	$40.00
4/25	95	$35.00
4/28	Electronic	$30.00

8. **Calculate** What is the reconciled balance in the checking account?

   a. $700.
   b. $903.
   c. $908.
   d. $983.

9. Which, if any, of the following transactions have not yet been reported by the bank?

   a. Check #93.
   b. Check #94.
   c. Check #95.
   d. The 4/30 payroll deposit.

10. **Calculate** Abed carries an average monthly balance of $500 in his checking account. If his bank charges $5 per month as a minimum service fee, how much in *annual* interest (annual percentage yield, or APY) must Abed earn to cover the monthly fee?

   a. 1%.
   b. 5%.
   c. 10%.
   d. 12%.

Adventures in Personal Finance

Short Answer

1. What four reasons make holding a checking account so important today?
2. List some of the advantages associated with direct deposit.
3. How does an overdraft occur, and how can it be avoided?
4. What is the role of ChexSystems® from a bank's perspective? From a checking-account holder's perspective?
5. Match the following terms with their correct definitions:

   a. Bank routing number.
   b. FDIC deposit insurance coverage.
   c. Overdraft.
   d. Reconciliation.

   1. Balancing a monthly bank statement with a check register.
   2. A digital code on a check that helps facilitate check processing.
   3. The act of writing a check for an amount greater than what is in the account.
   4. Coverage that provides up to $250,000 in protection for an account holder.

6. Describe some of the most important things you should look for when opening a checking account.
7. **Calculate** Assume that your cousin just received an account statement from the bank. The statement shows a balance of $683. Your cousin's check register shows a balance of $500. Use the checking account reconciliation format that follows to determine the dollar value of all outstanding checks. Use the following information in your calculations:

   a. The monthly service charge was $10.
   b. Interest earned was $3.
   c. No deposits were made.

Checking Account Reconciliation

Checkbook balance
  Less: Service charges
  Plus: Interest earned
    Net balance
Balance from bank statement
  Plus: Deposits not shown on statement
  Less: Checks outstanding
    Reconciled balance (should match checkbook)

Explore

1. Visit the **Consumer Financial Protection Bureau** website and research the advantages and disadvantages associated with overdraft protection. Specifically, determine when adding overdraft protection to a checking account may be an appropriate financial planning strategy. Also, describe the type of consumer that should avoid overdraft protection.
2. Under the Fair and Accurate Credit Transaction Act (FACTA), all consumers are entitled to a free copy of their consumer report once every 12 months. This report can have a significant influence on the type and costs of a checking account offered to you. Go to the ChexSystems website and request your free personal consumer report. If you have questions about specific aspects of the report, what help options are available to you?
3. **Presentation** Visit three local banks or credit unions (either in person or online). Create a table that compares the features, benefits, and costs associated with each institution's checking account offerings. Share the results of your research with others in class by recommending the "best" checking account for a student.

Expanded Learning Activity

Writing Write a one-page report on strategies that people can use to reestablish a checking account if they have had a negative history of bouncing checks. A good place to start your research is the FDIC website. Be sure to share the results of your research with your class.

Debit and Prepaid Cards and Electronic Transfers

LO 5.2 Identify the differences and similarities among debit cards, prepaid cards, electronic transfers, and checking accounts.

As recently as 1995, the majority of spending transactions in the United States were made with a check. However, the days of pen-and-paper transactions as the primary method of doing business are gone forever. In today's fast-paced world, **electronic transactions**—payments made at the time of a purchase and transfers of money from one account to another—are quickly becoming the standard. They're not, however, the only approach. This topic provides information about the three main ways consumers make transactions today: (1) traditional, (2) electronic, and (3) hybrid transactions.

Purchases and Transactions

Transaction Methods Used

HELPFUL HINT

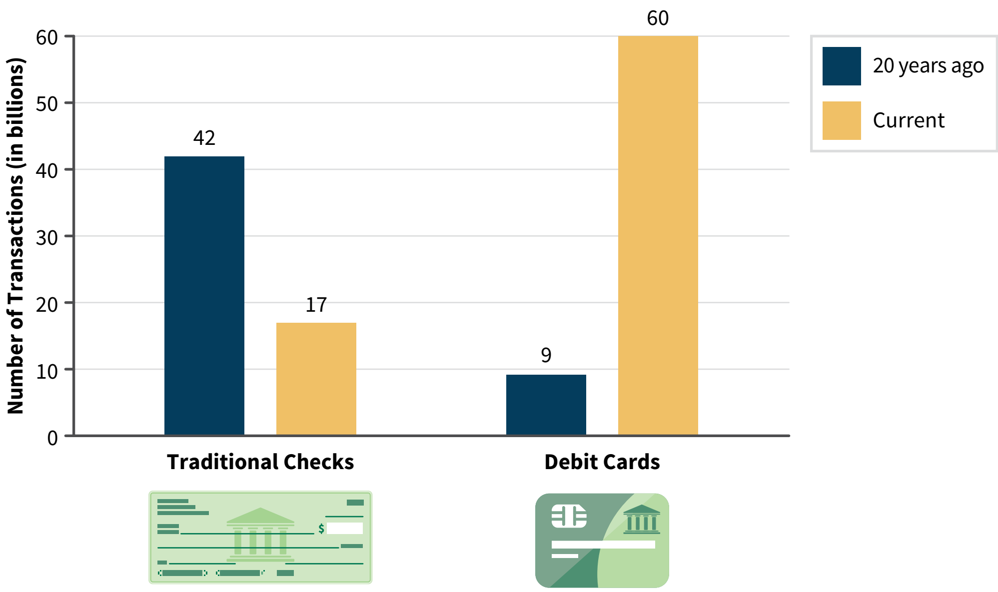
Today, the number of electronic transactions is larger than all other traditional methods used to make purchases and transfer money.

Look at **Illustration 5.2.1**; two things should stand out immediately (see **Helpful Hint**).

1. People still write many checks; however, the number of checks being processed has fallen by more than 50% since 2000.
2. The number of debit-card transactions has increased more than 600% over the same period.

ILLUSTRATION 5.2.1

Comparison of Transaction Methods



Source: Board of Governors of the Federal Reserve System.

Although the volume of transactions is now clearly dominated by debit cards and other electronic forms of payment, this doesn't mean that the simple checking account is going away any time soon—in fact, the opposite is true. Access to a checking account is even more important today than at any time in the past. A checking account gives consumers access to the world of electronic transactions.

How Payments Are Made

Let's look more closely at the way most goods and services are purchased and how cash is transferred today. Payments made in the United States can be classified into three groups:

1. Traditional methods, including cash, coins, and checks.
2. Electronic payments, such as debit cards and prepaid cards.
3. Hybrid methods, a combination of traditional methods and electronic payments.

We will explain electronic payments and hybrid methods in more detail in a moment. Before we do, let's review the traditional methods. Whenever you make a purchase using cash, coins, or checks, you are using the oldest and most traditional form of payment. Although traditional transactions often make sense, it's important to remember that you have no protection if your cash is stolen or lost. Credit cards are another form of payment that many people use, but note that the ultimate payment to the credit card company must be made using one of the methods described in this topic. We discuss credit cards in more detail in a later topic.

Electronic Payment Methods

Whether it's the total volume of transactions or the dollar value of transactions, electronic payments dominate the payment and transfer options used by consumers today. **Illustration 5.2.2** lists and defines most of the electronic methods currently available and frequently used. The following discussion highlights the role of debit and prepaid cards.

ILLUSTRATION 5.2.2

Electronic Payment Methods

Type of Payment Method	Description
Debit card with PIN	Payment made directly from cardholder's checking account using a personal identification number (PIN) to verify the transaction.
Debit card with signature	Payment made directly from cardholder's checking account using cardholder's signature to verify the transaction.
Prepaid card	Payment made from money loaded onto the card in advance to make payments in the future.
Direct debit	Payment made electronically without a debit card.
Electronic bill-paying service	Payments made by direct debit from an account holder's bank through a noncard-payment network (e.g., the preferred way to pay federal income taxes).

Source: Fumiko Hayashi and William R. Keeton, "Measuring the Costs of Retail Payment Methods," *Economic Review 2* (2012). Retrieved from http://www.kc.frb.org/publicat/econrev/pdf/12q2Hayashi-Keeton.pdf.

Debit Cards

When you open a checking account, you'll be offered a debit card as a component of your account.

- Debit cards are marketed as a substitute for traditional paper checks. The key difference is that with a check, money is usually transferred from your account to the merchant only after the seller deposits the check. With a debit card, the transaction occurs instantaneously.
- A debit card works well for those who would otherwise overspend with a credit card. Without **overdraft protection**, which allows someone to spend more than their account balance, you can't spend more than what is in the account (see **Helpful Hint**). On the other hand, this can limit your options, especially in the case of an emergency.
- A less expensive alternative to overdraft protection is overdraft protection transfers. Overdraft protection transfers automatically move money from your savings account to your checking account. There are limits on the number of transfers that can be made each month, so the best option is to simply make sure you have enough money in your account to cover the expense.

HELPFUL HINT

The Consumer Financial Protection Bureau recommends that most consumers drop overdraft protection as the average overdraft fee is $34, but most purchases that trigger the fee are no more than $24. Instead of paying outrageous fees for insufficient funds, you'll be in much better shape by managing income and expenses carefully.

What happens if you lose your debit card or it is stolen? Don't panic but do immediately call your card issuer to report the loss or theft. Follow this up with a hard-copy letter that you should send using certified mail. Finally, check with your insurance company. Some homeowner's and renter's policies cover fraudulent purchases.

Prepaid Cards

A **prepaid card** consists of money loaded on to the card in advance that can then be used to make payments in the future. Unlike a debit card, you don't need a bank or checking account to get a prepaid card. You can put money on a card via an online transfer, in person, or direct deposit. Keep in mind, however, that most prepaid cards charge a variety of fees and are a higher cost alternative to debit cards.

A few words of caution are needed about prepaid cards.

- The numbers and types of prepaid cards are varied. For example, firms as diverse as restaurants, department stores, and online retailers offer prepaid cards.
- Some prepaid cards may only be used to purchase goods and services from one retailer. Other cards, such as the WalMart® MoneyCard, can be loaded with money and used worldwide wherever Visa® or MasterCard® are accepted.
- Generally, prepaid cards should be considered similar to cash, with little **fraud protection**, which is assistance in case a prepaid card is lost or stolen. For example, some prepaid cards will reimburse only up to $500 for fraudulent purchases.

Given the limited fraud protection and potentially higher fees, debit cards tend to be a better method of payment than prepaid cards.

Hybrid Payment Methods

HELPFUL HINT

Should you be concerned about all of these payment options? Not necessarily, but you should be aware of how the financial world is changing.

The line between checks, debit cards, prepaid cards, and other forms of electronic payments—online payments, mobile transfers, smart cards, and peer-to-peer payments (P2P)—is quickly blurring. Things have gotten even more complicated with the addition of smartphone payment options (see **Helpful Hint**).

- **Peer-to-peer payment (P2P)** apps allow you to transfer money from your bank to someone else in your personal network.
- The transfer occurs from one smartphone to another.

Banks, credit unions, and other financial institutions are always looking for ways to move money faster and improve the buying experience, such as **cryptocurrencies** like Bitcoin. These hybrid currencies act like cash but work like P2Ps.

Automated Clearing House (ACH)

The role of the **Automated Clearing House (ACH)**, which is a nationwide network of banks, credit unions, and other depository institutions that send each other credit and debit transfers electronically, is growing in importance.

- ACH transactions make up a high percentage of all payments made in the United States, and the volume of these types of transactions is increasing by nearly 5% annually.
- Credit transfers include wages, salaries, Social Security benefits, and tax refunds; debit transfers typically are payments for mortgages, utility bills, and credit card payments.

Illustration 5.2.3 provides an example of how the system works.

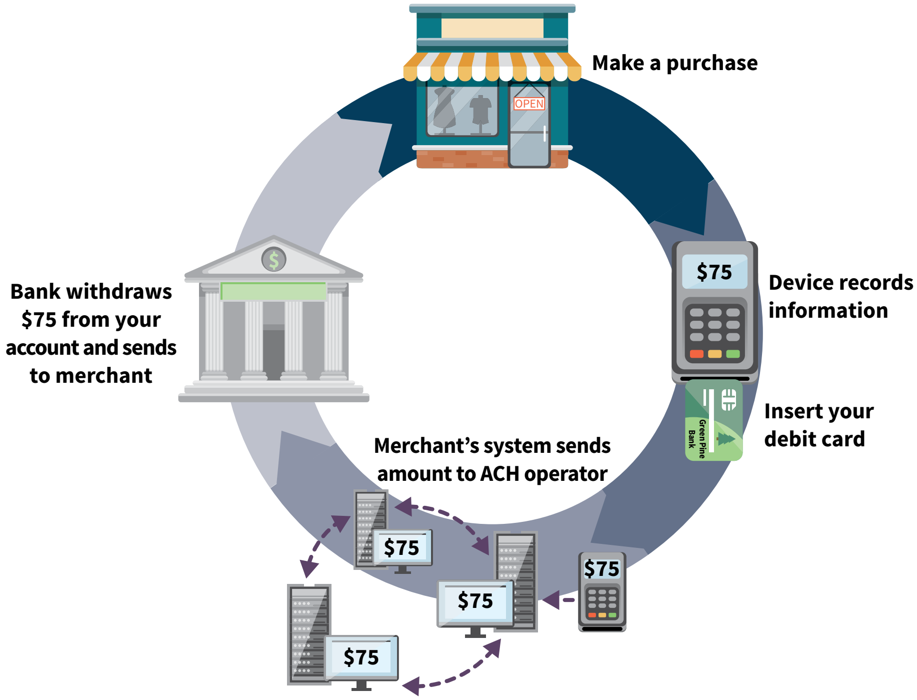


ILLUSTRATION 5.2.3

Automated Clearing House (ACH) Process

Check-to-Electronic Conversion

Another type of hybrid method is the **check-to-electronic conversion**. With this method, payment with a paper check is immediately converted at the point-of-sale terminal (such as at the check-out counter at the grocery store) to an electronic form of payment. **Illustration 5.2.4** summarizes the key features of ACH payments and check-to-electronic conversion methods.

ILLUSTRATION 5.2.4

Hybrid Payment Methods

Peer-to-peer (P2P)	P2P apps allow you to transfer money from your bank account to someone in your network. The transfer occurs from one smartphone to another.
Automated Clearing House (ACH)	Payments made directly through electronic fund transfers; similar to electronic bill-paying services but broader in transacting both debit and credit transactions.
Check-to-electronic conversion	Payment made at point of sale with paper check that is immediately converted to an electronic form of payment.

Source: Fumiko Hayashi, and William R. Keeton, "Measuring the Costs of Retail Payment Methods," *Economic Review 2* (2012). Retrieved from http://www.kc.frb.org/publicat/econrev/pdf/12q2Hayashi-Keeton.pdf.

Choosing the Best Payment Method

Which is the best payment method: a check, a debit card, or a prepaid card? As you might imagine, the answer depends on whom you ask. Some people like checks because it makes it more difficult to buy things on impulse. After all, you must have your checkbook with you, and checks also provide a nice paper trail of expenditures. Some consumers prefer debit cards because purchases can be made quickly and efficiently. Others prefer prepaid cards, most often because they do not have a checking account.

Comparison of Methods

As you can see, checks, debit cards, and prepaid cards each have advantages and disadvantages associated with their use. **Illustration 5.2.5** compares some of the features of debit cards and prepaid cards that you should consider as a way to make the best informed choice given your unique situation, goals, and financial resources.

ILLUSTRATION 5.2.5

Comparison of Debit and Prepaid Cards

Factor to Consider	Debit Card	Prepaid Card
Insurance if financial institution goes out of business	FDIC or NCUA insurance up to $250,000	Limited loss liability
Fraud protection	**1.** If card reported lost before any unauthorized withdrawals, your loss liability is limited to $0 **2.** If loss reported within 2 business days after card lost, your loss liability is limited to $50 **3.** If loss reported after 2 business days but before 60 days, your loss liability is limited to $500 **4.** You have unlimited loss liability after 60 days	Unlimited loss liability (some card issuers may provide limited protection)
Fees	Generally low or no fees but potentially: • Lost card fee • Out-of-network ATM transactions	Generally higher fees than debit cards; fees may be charged for: • Monthly maintenance • Load and reload of funds • ATM transactions • Card replacement • Card balance inquiries

Minimizing Fraudulent Use

A key point from this topic is that you need to be careful whenever you use a debit or prepaid card. Here are a few tips to minimize the possibility of someone using your card in a fraudulent manner:

- Don't give your account number over the phone (unless you initiated the call).
- Keep a record of all your accounts and cards in a safe place.
- Don't sign a blank debit slip.
- Reconcile your bank account(s) monthly.
- Carry only the card(s) you need and use.
- Don't carry your PIN in your wallet or purse, and never write it down on something that can get lost.
- Double-check all transactions on your monthly statement against your receipts.
- Shred copies of old receipts and old cards.

Concepts in Action

Xavier is a busy college student. He has had a debit card since high school but has not used it for over a week. When out with friends and paying for dinner, he noticed that his card was gone. He rushed back to his dorm room and couldn't find it. What should Xavier do? If his card is used in a fraudulent transaction, how much will his liability be? What might he have done to avoid this situation?

Solution

Xavier needs to call his bank immediately and report the card as lost. His maximum possible loss is $500 because he reported the loss after 2 days but before 60 days. He should have taken better care of his debit card and treated it like cash. By checking every day, Xavier would have known earlier if the card was gone, which would have limited his liability.

End-of-Topic Assessment

Multiple-Choice Questions

1. Today, the majority of Americans make payments using:
   - **a.** checks.
   - **b.** prepaid cards.
   - **c.** Automated Clearing House payments.
   - **d.** debit cards.

2. One method to verify a debit-card transaction is through the use of a:
   - **a.** personal interest number.
   - **b.** personal identification number.
   - **c.** public interest number.
   - **d.** public identification number.

3. A payment made directly from a cardholder's checking account using the cardholder's signature to verify the transaction is called a(n):
   - **a.** check transaction.
   - **b.** debit card with signature.
   - **c.** check-to-electronic conversion.
   - **d.** Automated Clearing Housing transaction.

4. When Ann was traveling outside of the United States, she found the perfect souvenir. Unfortunately, when she went to make the purchase with her debit card, the transaction was denied. This happened because Ann had only $200 in her account, and the souvenir cost $300. Ann was disappointed and regretted having to pass on her purchase. What could Ann have done before her trip to ensure that she could spend more than what was in her account?
   - **a.** Added overdraft protection transfers from her savings account to her checking account.
   - **b.** Traded her debit card for a prepaid card.
   - **c.** Asked her bank to allow a direct debit for international purchases.
   - **d.** Added fraud protection to her account.

5. At a minimum, to obtain a prepaid card you need:
   - **a.** a bank account.
   - **b.** a checking account.
   - **c.** cash.
   - **d.** a debit card(s).

6. Place the following Automated Clearing House or hybrid process steps in order:
   - **I.** Sign check.
   - **II.** Record check information with device.
   - **III.** Deduct payment after bank receives information.
   - **IV.** Merchant system sends check data to ACH operator.

   - **a.** I, II, III, IV.
   - **b.** I, II, IV, III.
   - **c.** II, I, III, IV.
   - **d.** III, II, IV, I.

7. Rahim purchased a car 6 months ago. When he applied for an auto loan, the lender required that Rahim allow the bank to automatically debit his checking account on the 15th day of each month until the car is paid for in full. This transfer is an example of what type of electronic payment method?
   - **a.** Credit transfer.
   - **b.** Automated Clearing House transfer.
   - **c.** Debit transfer.
   - **d.** Check transfer.

8. Tommy lost his prepaid "City Buck" card 3 weeks ago. Someone found the card and made $350 worth of purchases, which was enough to deplete the card's value. How much fraud protection can Tommy count on?
   - **a.** $0.
   - **b.** $50.
   - **c.** $500.
   - **d.** $350.

9. Marc is just starting out in the world of personal finance. Help him determine the most appropriate way to avoid being a victim of debit-card fraud. Which of the following should Marc do on a regular basis to protect himself?
   - **a.** Keep a mental checklist of recent purchases rather than write down the details so that a potential thief cannot obtain detailed shopping information.
   - **b.** Carry all his debit and prepaid cards in his wallet to ensure that if his apartment gets robbed the thieves will not get the cards.
   - **c.** Share his PIN with his girlfriend, best friend, or work colleague as a safety precaution.
   - **d.** Cut up or shred his old card(s).

10. Nedra uses her debit card on a daily basis. The last time she used it was the evening before at a restaurant. This morning, she noticed that the card was missing. How long does she have to report the card as lost to have 100% protection against fraudulent use?
    - **a.** She has 2 days from the date of the last authorized use.
    - **b.** She has 2 days from the date she determined the card was lost.
    - **c.** She has 30 days from the date of the last authorized use.
    - **d.** She must report the card immediately before any unauthorized withdrawals are made.

Adventures in Personal Finance

Short Answer

1. What is the potential loss liability you could face if your debit card is lost or stolen and used to make fraudulent purchases?

2. Name two features of debit cards that help to prevent someone else from using your card without your authorization.

3. Imagine that your cousin just heard you're learning about personal finance topics. She called because she was recently surprised when shopping at the mall. She was ready to check out of a store with her purchase, and the salesperson asked, "Will you pay with cash, check, or credit?" She answered, "With a check." After writing out the check and recording the transaction in her checkbook ledger, your cousin was alarmed that the salesperson took the check, scanned it, and handed it back to her. The salesperson said, "Please use the touch screen to verify the amount and sign. You're all set; have a wonderful day." What happened? How would your cousin verify that the purchase was handled correctly?

4. Many consumers are drawn to prepaid cards because the card provider advertises that there are no "credit checks" or "overdraft fees." Explain why this type of advertising is technically accurate but somewhat misleading.

Explore

1. There are many online resources that offer suggestions for how to avoid debit-card fraud, such as never giving another person your PIN. Using at least two online websites, list five other ways to protect yourself against debit-card fraud. Note the online resources that you use in your research.

2. Many banks now include *Visa Mobile Location Confirmation* in their smartphone apps. The app will use a debit cardholder's smartphone location ability to verify that this person is near where the card is being used. Go online to learn more about this type of debit-card protection. What might be the pros and cons of this app?

3. **Writing** **Presentation** Find out how much banks and credit unions in your area charge in fees for overdraft or insufficient funds. Based on this information, how much would someone pay if he or she had five overdraft charges in a year? Write a brief summary of your findings, highlighting which financial institution has the lowest overall cost for overdrafts. Be sure to share your findings with others in class.

4. **Writing** **Presentation** Visit the **Department of Justice (DOJ)** or **Federal Bureau of Investigation (FBI)** website. Conduct a search using the phrase "debit-card fraud." Choose one or two reports of particularly alarming events that the DOJ and FBI have on their websites. Summarize the reports and share your stories with others in your class.

Expanded Learning Activity

Presentation Opening a prepaid card is one way for those without a stellar credit history to purchase items and services quickly and efficiently. Firms such as **WalMart**, **Target**, and **Macy's** offer prepaid cards that can only be used to make purchases from one retailer. These firms and others also offer Visa® and MasterCard® prepaid cards that can be used worldwide. Technically, anyone can open a prepaid card by providing his or her name, address, birthdate, Social Security number, phone number, and proof of residency. Knowing this, visit at least three stores or online outlets that offer prepaid cards and make notes about each firm's ownership requirements, minimum deposit conditions, and fraud protection. Once you've put together your notes, share these with your class and discuss which prepaid card(s) offer(s) the best deal from a consumer's point of view.

Costs of Borrowing

LO 5.3 Determine the costs associated with borrowing money.

Throughout your life, there may be times when you won't have enough money in your checking and savings accounts to make important purchases or pay for unexpected expenses. The best protection against these times is to have an emergency fund. An **emergency fund** is just that—money set aside for expenses that have not been budgeted for but have to be paid. (We discuss emergency funds in detail in a later chapter.)

However, unexpected large expenses, such as paying for costly automobile repairs or college tuition bills, often occur relatively early in an adult's life before emergency funds can be built up or sufficient savings can accumulate. As a result, you may need to borrow money by obtaining a loan. This chapter introduces the topic of borrowing. Different types of loans (such as auto, student, and housing) are discussed in greater detail in a later chapter.

Overview of Loans

Loan Providers

You can apply for loans from a number of financial institutions, such as commercial banks and credit unions. These financial institutions bring together savers and borrowers by providing a system in which savers can earn interest on their deposits and borrowers can obtain loans.

- Banks, credit unions, and other deposit institutions are often referred to as **mainstream financial service providers**.
- There's also a growing lending industry called **alternative financial service providers**, such as check cashers, money order providers, and payday lenders. These lenders tend to be much more expensive to use, but they are often more convenient for those who use their services.

In this section, we focus primarily on mainstream financial service providers.

Before you can obtain a loan, whether for a credit card or a car loan, you'll need to complete an application. Your financial institution will then review the application to determine if you are a good candidate for a loan, that is, if it looks likely that you will be able to pay back the amount that you borrow plus interest and fees charged by the lender in a timely manner.

Elements of a Loan

A loan consists of several elements:

- **Principal:** The amount of money you borrow (the loan) that must be repaid.
- **Interest:** The money paid to the lender for the use of their money (see **Helpful Hint**). How much it costs to borrow is determined by the interest rate charged on the loan.
- **Loan fees:** Additional money paid to the lender for things such as processing the loan or loan payments, late payments, and any other fees the lender may require the borrower to pay.

HELPFUL HINT

Charging interest is one of the ways financial institutions make money.

The total amount of fees and interest charged by the lender for a loan is called a **finance charge**. When you borrow money in the form of a loan, you'll be responsible for paying back not only the principal but also the interest and any fees, as **Illustration 5.3.1** shows.

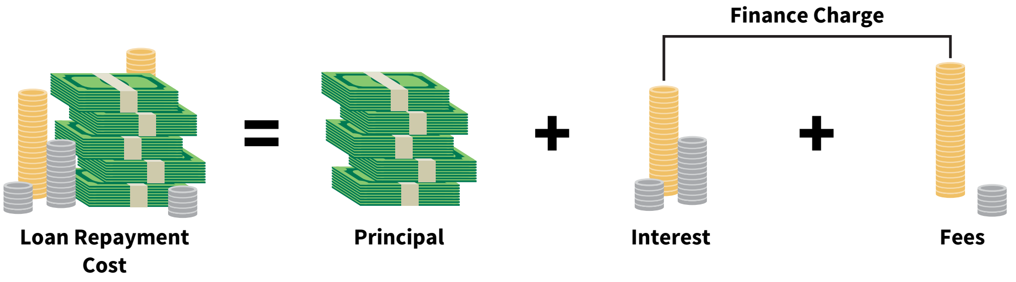
Loans and Collateral

Collateral

Often when a loan is made, the lender will want something of value, called **collateral**, that can be sold in the event that the loan payments are not made by the borrower. Lenders often do this

ILLUSTRATION 5.3.1

Total Loan Repayment Costs



by placing a **lien** on the collateral, which gives the lender the legal right to sell the collateral if the borrower does not repay the loan. This works great when you are borrowing money for a new car because the property you are purchasing with the loan can also serve as collateral for the loan. Collateral often reduces the cost of the loan because it reduces the lender's risk. But what if you don't have property that you can pledge as collateral?

Recall that your greatest asset is your human capital! It's illegal to pledge yourself as collateral for a loan, but you can pledge your future earnings as collateral for a loan.

HELPFUL HINT

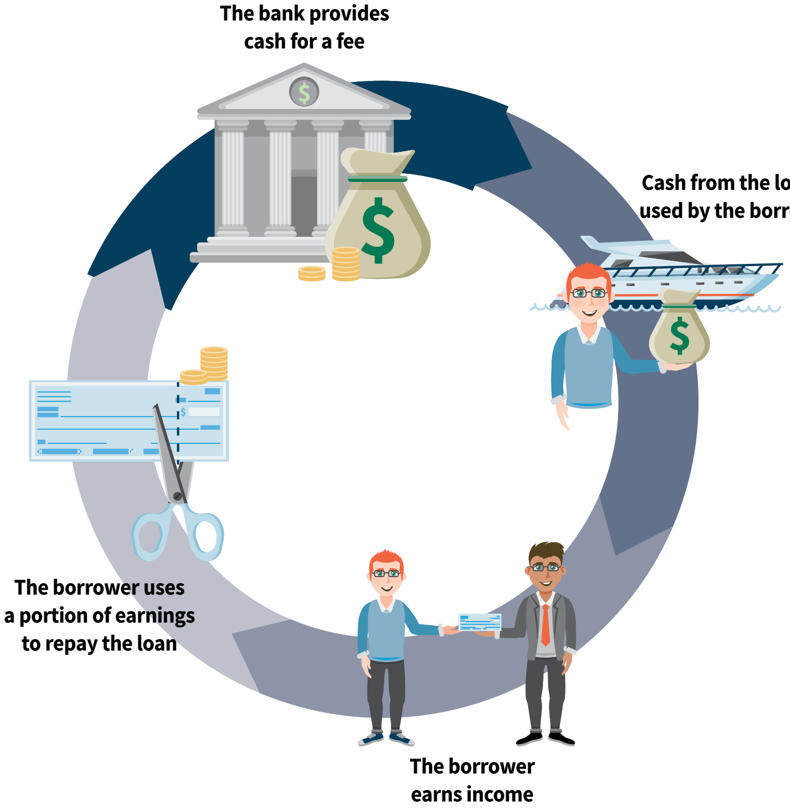
The most notable exception to this is student loans, but you're still pledging future earnings to repay the loan.

- Even when there's property serving as collateral for the loan, you're still pledging a portion of your future earnings to repay that loan.
- This is why few lenders will lend you money without proof of earnings (see **Helpful Hint**).

The lender is providing a critical service by offering you resources to purchase what you desire today. In return, you're promising to repay the money borrowed plus the finance charge with future income, as shown in **Illustration 5.3.2**. In some states, if a borrower does not repay the loan, lenders can **garnish wages**, which is a court order to have the borrower's employer pay a portion of the borrower's wages directly to a creditor.

ILLUSTRATION 5.3.2

The Process of Borrowing and Making Payments



Using Loans Wisely: Two Examples

When considering whether to obtain a loan, you should carefully consider whether the purchase you make with the loan proceeds will increase your future earnings, which will make it easier to repay the loan. If the loan is used to purchase things that will not benefit you in the future or will not increase your ability to repay the loan, then you'll likely regret the purchase each time you make the loan payment. To illustrate this, let's look at Louis and Javier.

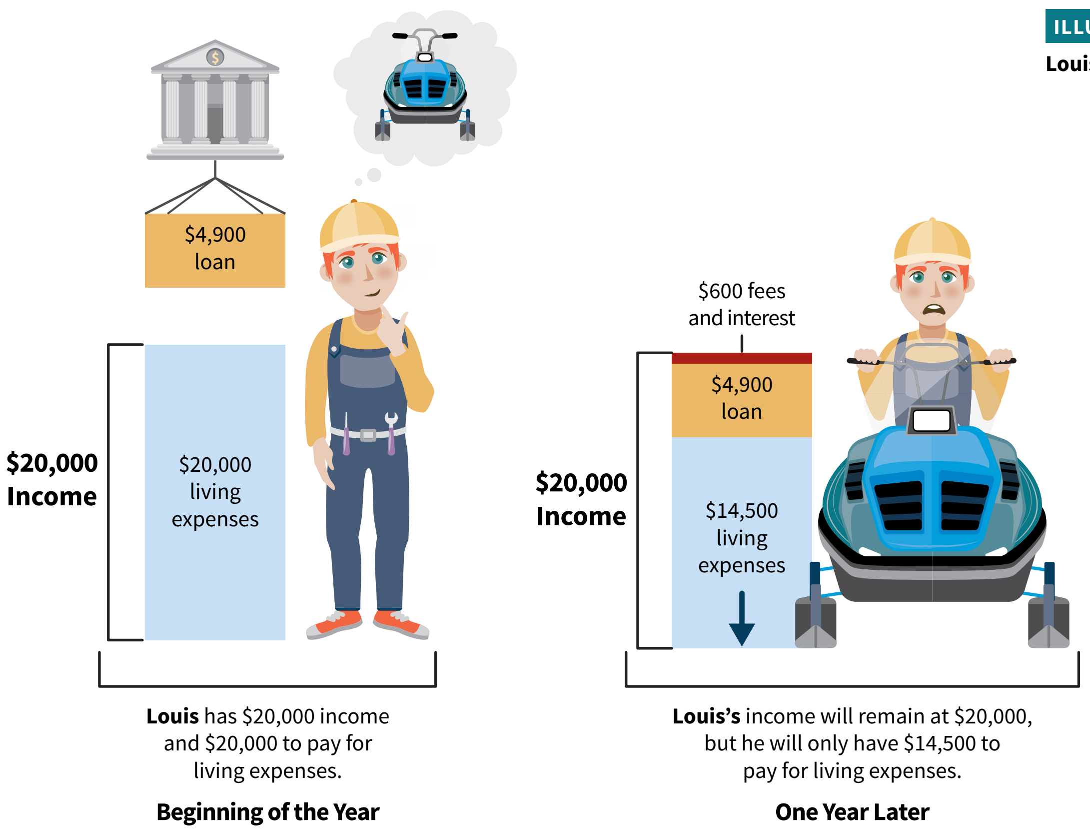
Louis makes $20,000 per year working as a tire technician at a local tire store in Montana. Louis's income for this year and next year is $20,000. Louis is thinking about taking out a 1-year, $5,000 recreational vehicle loan to purchase a snowmobile and small trailer.

- He spends most of his current income to support his level of living, so the only way he can afford the snowmobile is by obtaining a loan.
- The bank offers Louis a $5,000 loan that must be repaid in full through monthly payments over the following year.
- The bank charges interest of $500 plus a $100 loan origination fee.
- The bank deducts the loan origination fee from the money that Louis receives from the loan. This means Louis receives only $4,900 ($5,000 loan minus $100 loan origination fee), but he's still responsible to pay interest on the full loan amount of $5,000.
- The total finance charge is $600 ($500 interest plus $100 loan fee).

Louis was able to get the snowmobile and trailer he wanted this year, but will he still be happy next year when he is repaying the loan?

In looking at **Illustration 5.3.3**, it's likely that Louis will be frustrated next year. He'll still earn $20,000, but from this income he'll also need to repay the $4,900 plus the finance charge on the loan of $600. This will leave him with $14,500 to pay his living expenses, which in the current year cost him $20,000. Because of the loan payments that Louis has to make next year, without an increase in future income, his level of living will actually decrease and he'll have a greater difficulty paying his bills in the future.

ILLUSTRATION 5.3.3
Louis's Cash Flow with a Loan



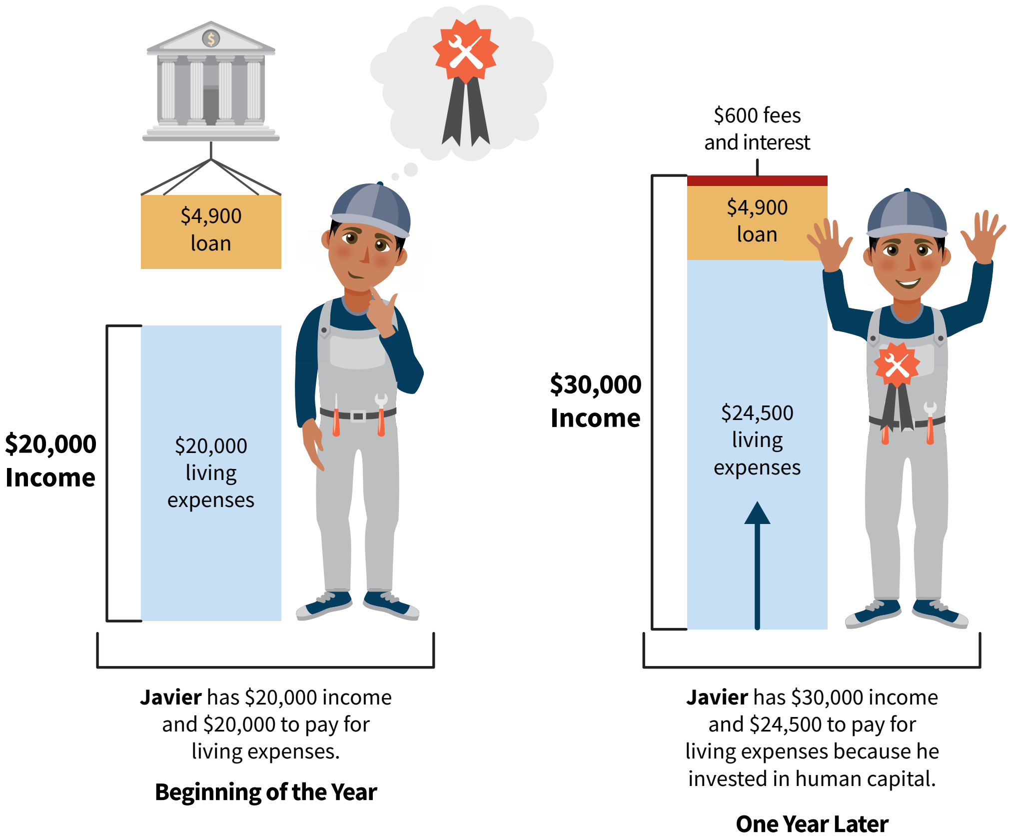
Now consider Javier, who also works as a tire technician for $20,000 each year at the same local tire shop. Javier is also using all of his current income to pay for his current level of living, but he wants to be a certified mechanic.

- Javier also borrows $5,000 during the current year to pay for his mechanic training and certification.
- Javier borrows the money from the lender with the same terms as Louis.
- His purchase of training and certification increases his human capital, which means his subsequent future income will be higher.
- As a result of his increased training and certification, Javier's income next year is increased to $30,000.

Illustration 5.3.4 shows Javier's cash flow from the loan and his expanded future income resulting from higher human capital.

ILLUSTRATION 5.3.4

Javier's Cash Flow with a Loan



In these examples, the lender allowed Louis and Javier to pledge their future income as collateral and then assessed a finance charge for the loan. Louis used his loan to increase his consumption of fun things. As a result, the amount he had to spend on consumption in the future was lower. Javier used his loan to invest in his human capital, which increased his future income and future consumption. In fact, in the following year, Javier was able to purchase the same snowmobile and trailer that Louis did. But, Javier did not have to apply for a loan to make the purchase, and he will not have to reduce his consumption of other things!

Choosing the Right Loan

It generally makes sense to invest in things that increase your ability to earn more money so you can achieve your financial goals. Some of the best investments you can make include education, home ownership, and reliable transportation to get to work. If you can pay for these investments

without going into debt, you're better off in the long run. If you have to borrow money to make these investments, do it wisely to ensure that the cost of borrowing does not outweigh the benefit of the investment. When you borrow money, be sure to get answers to these questions:

1. What is the finance charge for this loan?
2. Will this loan increase or decrease my income or level of living in the future?

Finance Charges

All lenders include a finance charge as part of the loan-making process (see **Helpful Hint**). Recall that a **finance charge** is the total cost of borrowing money. It includes the interest that will be paid, any fees associated with borrowing the money, and any fees paid as the loan is repaid, such as late fees. Finance charges are generally stated in absolute dollars.

HELPFUL HINT

Lenders are required to disclose the expected finance charge within the loan contract.

Installment Loans

Installment loans are designed to be repaid over a fixed period of time through regular (usually monthly) payments. There are two general types of installment loans:

1. **Fixed installment loans** are lending contracts wherein the lender agrees to loan the borrower a certain amount of money at a set interest rate for a set time period. In turn, the borrower agrees to repay the money through fixed monthly payments that will not change during the life of the loan.
   - The borrower gets all the money at once and then begins to make repayments over time.
   - Once repayments start on a fixed loan, the loan balance always decreases when payments are made until the loan is paid in full.
   - Common fixed installment loans include auto loans, education loans, and mortgages.
2. **Variable installment loans** are also structured so that the loan will be paid off within a certain time period. However, the payments required by the borrower may fluctuate during the repayment period due to changes in the interest rate.
   - If the interest rate changes, then the payments due each month will also change. Thus, consumers with a variable installment loan may see the amount charged for interest each month increase or decrease, depending on whether interest rates rise or fall (see **Helpful Hint**).
   - Be cautious with variable installment loans because the change in interest charged may increase or decrease the loan payments or the length of the loan term by decreasing or increasing the amount of each payment being applied against the loan principal.
   - Almost any loan can be set up as a variable installment loan.

HELPFUL HINT

With a variable installment loan, the interest rate can change monthly, but most often it only adjusts once or twice per year.

Most borrowers prefer a fixed loan payment that comes with fixed installment loans because no one likes to see loan payments increase. Further, although variable installment loans can have a lower finance charge over long periods of time, keep in mind that you must be able to financially manage increased loan payments if interest rates go up rather than down.

Calculating Interest

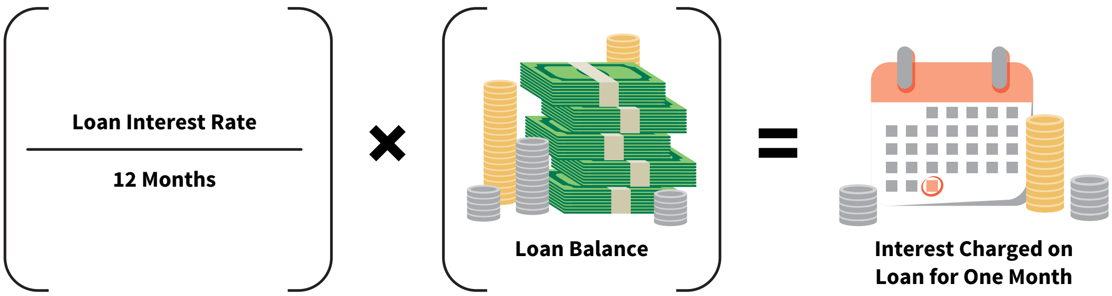
Using Amortization Tables

To calculate the interest that will be charged during any given time period, just multiply the outstanding loan balance by the interest rate stated for the loan for a given time period. For example, on January 1, assume Jose borrows $1,000 with a fixed interest rate on the loan of 9.6% and a loan term of 12 months. Jose will be making monthly payments of $87.73. How much of Jose's February 1 loan payment would be interest charged for January, the first month of the loan?

To calculate the answer, simply use the formula shown in **Illustration 5.3.5**.

- In Jose's case, you would multiply the outstanding loan balance of $1,000 by the monthly equivalent of the 9.6% interest rate, which is 9.6% divided by 12, or 0.8% (or 0.008). This is the periodic interest rate.

ILLUSTRATION 5.3.5 **Calculating the Interest Charges**



- The amount of interest that Jose will be charged in January is therefore $8.00 [(0.096 ÷ 12) × $1,000].
- Of Jose's total loan payment of $87.73, $8.00 will be interest and $79.73 will be applied to the loan principal.
- The principal payment will reduce the loan balance to $920.27.

The amount of principal that Jose will repay depends on the **loan term**, which is the length of time Jose has to repay the loan. As the loan is repaid, the amount of interest charged each payment period decreases, and therefore the amount of each payment being applied to the loan principal increases. An **amortization table**, like the one shown in **Illustration 5.3.6** for Jose's loan, shows the amount of interest and principal associated with each fixed loan payment over the entire loan term.

ILLUSTRATION 5.3.6 **Amortization Table for Jose's Loan**

		Interest		Principal		Loan Payment	
Date	**Payment**	**Interest**	**Calculation**	**Principal**	**Calculation**	**Loan Balance**	**Calculation**
Jan.	No payment due because he just received the loan					$1,000.00	
Feb.	$87.73	$8.00	$1,000 × .008	$79.73	$87.73 – $8.00	$920.27	$1,000 – $79.73
Mar.	$87.73	$7.36	$920.27 × .008	$80.37	$87.73 – $7.36	$839.90	$920.27 – $80.37
Apr.	$87.73	$6.72	$839.90 × .008	$81.01	$87.73 – $6.72	$758.89	$839.90 – $81.01
May	$87.73	$6.07	$758.89 × .008	$81.66	$87.73 – $6.07	$677.23	$758.89 – $81.66
June	$87.73	$5.42	$677.23 × .008	$82.31	$87.73 – $5.42	$594.92	$677.23 – $82.31
July	$87.73	$4.76	$594.92 × .008	$82.97	$87.73 – $4.76	$511.95	$594.92 – $82.97
Aug.	$87.73	$4.10	$511.95 × .008	$83.63	$87.73 – $4.10	$428.32	$511.95 – $83.63
Sept.	$87.73	$3.43	$428.32 × .008	$84.30	$87.73 – $3.43	$344.01	$428.32 – $84.30
Oct.	$87.73	$2.75	$344.01 × .008	$84.98	$87.73 – $2.75	$259.03	$344.01 – $84.98
Nov.	$87.73	$2.07	$259.03 × .008	$85.66	$87.73 – $2.07	$173.38	$259.03 – $85.66
Dec.	$87.73	$1.39	$173.38 × .008	$86.34	$87.73 – $1.39	$87.03	$173.38 – $86.34
Jan.	$87.73	$0.70	$87.03 × .008	$87.03	$87.73 – $0.70	$0.00	$87.03 – $87.03

HELPFUL HINT

If you talk with multiple lenders and get several different offers for loans, you should be able to negotiate the fees and the interest rates of your loan.

Notice that slightly less than 10% of the first loan payment went to pay interest; however, for the last loan payment, less than 1% of the payment amount went to pay interest. As a general rule, as the repayment period and interest rate increase, the percentage of loan payments used to pay interest increases dramatically. For example, for a 30-year $200,000 home loan charging a 5% interest rate, 78% of the first loan payment goes to pay interest (see **Helpful Hint**). Over a 30-year mortgage, a 1% or 2% higher interest rate will cost the borrower tens of thousands of dollars!

Annual Percentage Rate (APR)

Sometimes total finance charges can be difficult to compare across loans. As a way to simplify comparison shopping for consumers, the federal government requires lenders to disclose the **annual percentage rate (APR)** charged on a loan.

- The APR is a broad measure of the cost of borrowing and includes both the interest rate charged and any required fees for the loan.
- Generally, loans of a particular type (e.g., home loans) include the same type of fees in the APR calculation.
- For home loans, the APR is higher than the loan's annual interest rate.
- For credit cards, the APR is typically equal to the effective interest rate charged on outstanding balances and doesn't include costs such as an annual fee to have the credit card.

Concepts in Action

Your sister just graduated from college and wants to get a car loan. She would like to borrow $10,000 and repay it over 5 years. She has three offers:

1. Great Bank is offering her a no-fee 1.99% APR loan.
2. Best Bank is offering her an interest rate of 1.89% with $100 of loan fees (2.29% APR).
3. The car dealership is offering her a loan with an interest rate of 1.69% and only $125 in loan fees (2.19% APR).

What is your advice to your sister?

Solution

Compare the loans by reviewing the APR associated with each loan. The first loan has an interest rate and APR that are equal because there are no fees to finance the loan. The next two loans have fees to process the loan, which cause the APR to be higher than the interest rate because the APR incorporates these fees. Thus, even though the interest rate charged by Best Bank and the car dealership are lower than Great Bank's interest rate, Great Bank has the lowest APR when all of the fees are included and therefore is the lowest cost to borrow. Great Bank's total finance charge is $514.03, Best Bank's total finance charge is $592.69, and the car dealership's total finance charge is $565.93.

End-of-Topic Assessment

Multiple-Choice Questions

1. **Calculate** Amy borrowed $5,000 from the auto dealership to purchase a used car to get to work. The auto dealer informed her that the total amount that she would need to repay included the $5,000 that she borrowed, $1,000 in interest, and $150 of loan fees for a total repayment amount of $6,150. What is the finance charge on Amy's auto loan?

   a. $150. **c.** $1,150.
   b. $1,000. **d.** $6,150.

Use the following information for Questions 2 through 5, (it will be helpful to create an amortization table). Tony borrows $4,000 at an annual interest rate of 8.4%. He receives the loan on the first day of the current month and will make monthly payments on the first day of each of the following months until the loan is repaid after 24 months (2-year loan). The monthly loan payment is $181.64.

2. **Calculate** How much interest will Tony pay as part of the first loan payment?

   a. $28.00. **c.** $153.64.
   b. $33.60. **d.** $181.64.

3. **Calculate** How much of Tony's fifth loan payment will be applied to loan principal?

   a. $181.64. **c.** $153.64.
   b. $157.99. **d.** $148.04.

4. **Calculate** On Tony's 24th (last) loan payment of $181.64, how much of the payment is for interest?

   a. $0. **c.** $180.38.
   b. $1.26. **d.** $181.64.

5. **Calculate** What is the total amount of interest, rounded to the nearest dollar, Tony has to pay for the loan over the entire 2-year loan term?
   - **a.** $336.
   - **b.** $359.
   - **c.** $672.
   - **d.** $719.
6. Which of the following borrowing purposes is most likely to lead to increased earning potential for the individual borrowing money?
   - **a.** Borrowing for education.
   - **b.** Borrowing for a car to commute to work.
   - **c.** Borrowing for a wedding ring.
   - **d.** Both borrowing for a car and borrowing for education are correct.
7. Sally borrowed money from her credit union using a fixed rate installment loan. She also paid a loan origination fee. Sally's interest cost will be calculated:
   - **a.** using her credit score for each month of the loan.
   - **b.** using the most current interest rate during each payment cycle; thus the interest rate fluctuates over the life of the loan.
   - **c.** using the APR for the loan.
   - **d.** using the finance charge.
8. Which of the following types of loans are always fixed installment loans?
   - **a.** Auto loans.
   - **b.** Mortgages (home loans).
   - **c.** Education loans.
   - **d.** Each of the answer choices can be either fixed or variable installment loans.
9. When the interest rate on a variable installment loan changes, which of the following could occur?
   - **a.** The monthly payment will increase or decrease.
   - **b.** The amount of each payment applied to the loan principal may increase or decrease.
   - **c.** The length of time until the loan is repaid may increase or decrease.
   - **d.** All of the answer choices are correct.
10. Lisa's loan includes interest and origination fees. The stated interest rate on Lisa's loan, used to calculate the monthly interest charge, is 5%. Which of the following is *true*?
    - **a.** The APR is higher than 5%.
    - **b.** The APR is lower than 5%.
    - **c.** The APR equals 5%.
    - **d.** The APR is impossible to determine.

Adventures in Personal Finance

Short Answer

1. For what purposes might you need to borrow money? Which of these purposes will substantially increase your income in the future? Which of these purposes will have little impact on your future ability to repay the loan and thus decrease your future well-being?
2. What are two examples of mainstream financial institutions that make loans to individuals?
3. Under what circumstances might it be unwise to borrow money for each of the following investments?
   - **a.** Education.
   - **b.** House purchase.
   - **c.** Car/transportation.
4. When comparing loans, there are many things to consider, such as interest rates, loan origination fees, monthly payment processing fees, and so forth. Rather than seeking to compare all of these different costs, what factors should consumers use when comparing loans?
5. Most consumers prefer to borrow money using fixed installment loans, whereas lenders may desire to lend using variable installment loans. What might explain this difference in preferences?

Explore

1. Some credit unions and banks are now offering short-term loans on their mobile apps. Compare the short-term loans available at three different credit unions or banks. Which short-term loan has the lowest APR? Which short-term loan is most favorable and why?
2. In the example from this topic, Javier invested borrowed money in education because that increased his ability to earn income. If you were (or are) working full-time now, how much do you (or could you) earn annually? After you graduate with a college degree in your chosen field of study, what is the average annual income? (You can check the Occupational Outlook Handbook at the **Bureau of Labor Statistics** website for this information, although keep in mind that the reported earnings includes all workers, regardless of their years of experience.) How much will your investment in college increase your earnings potential?

Expanded Learning Activity

Writing Think of your own situation. Are you currently borrowing any money? If so, what are you using that money for? Additionally, what might you do to improve your borrowing behavior? (*Hint:* If your spending is too focused on current consumption, how can you change this?) Write a one-page analysis of your current borrowing behavior and whether it is benefiting your future self.

Credit Reports

LO 5.4 Know the purpose of a credit report.

This text is about helping you improve your financial behavior and enjoy your lifetime financial journey by doing the right things with your money on a consistent basis. How well you are managing your loans is captured in a credit report, which determines how likely lenders will be to loan you money, how much that loan will cost, and what the interest rate will be. And it's not just lenders that use credit reports to determine if they will do business with you and, if so, at what price. Insurance companies, landlords, employers, and even the government use your credit report to make important decisions that affect you.

What Is a Credit Report?

Credit Report Actions

According to **Fair Isaac Corporation (FICO)**, the nation's leading credit report and credit-scoring company, a **credit report** is a summarized accounting of your credit history. You'll most likely have a credit report on file somewhere if you've taken any of the following actions (the blue arrows represent things that positively impact your credit report; the red arrows are negative events):

- ↑ Borrowed money from a company and used the purchased asset as collateral (e.g., buying a car, motorcycle, boat, furniture).
- ↑ Applied for, been accepted, and used a credit card.
- ↑ Took out a student loan.
- ↓ Declared **bankruptcy** (when you can no longer afford to make payments on your debt).
- ↓ Lost a home to **foreclosure** (when the lender takes back the house after you fail to make payments).
- ↓ Been sued and lost the court battle.
- ↓ Incurred court-related judgments, liens, or unpaid financial obligations (e.g., child support, unpaid fines).

Within the United States, there are three primary national credit bureaus: **Equifax**, **TransUnion**, and **Experian**. A **credit bureau** is a company that maintains housing and credit files on consumers. These are the firms that create and sell credit reports to organizations that have legal permission to view your information.

How Credit Reports Are Used

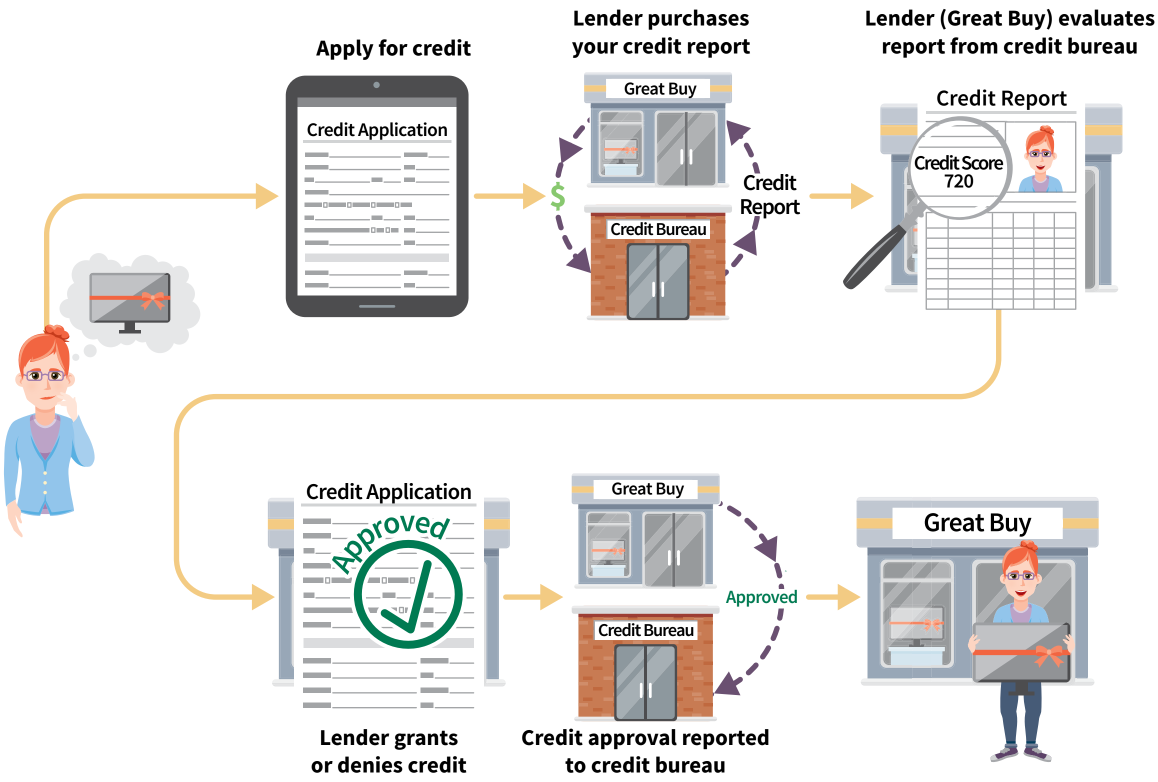
Suppose you want to buy a new television at Great Buy, a large retailer located near you. You go into the store and find the perfect HDTV. Unfortunately, the cost is higher than you anticipated. The salesperson can see that you want the HDTV but can't afford it, so she suggests that you apply for a Great Buy credit card. The salesperson tells you that if you get a Great Buy credit card, then you'll also get 10% off your purchase today. You could then use the credit card and buy the television at a discount. You agree to the salesperson's suggestion, and the credit-approval process begins.

1. When you apply for credit, you authorize Great Buy to obtain a copy of your credit report, most likely from one of the three national credit bureaus (although smaller credit bureaus exist in most large cities as well). When a lender requests your credit report to determine creditworthiness, it is referred to as an *inquiry*.

2. The credit bureau's analysis will be used to determine the probability that you will make timely payments in the future. They are making a judgment on your creditworthiness.
3. Assuming that you do get the credit card and buy the HDTV, Great Buy will report this to one or all of the credit bureaus.
4. Every 30 days or so, Great Buy will report information to the credit bureaus about your outstanding balance and payment timeliness.

Illustration 5.4.1 summarizes how credit reports are used as part of the credit-approval process.

ILLUSTRATION 5.4.1 **The Process of Credit Approval**



HELPFUL HINT

Establishing and maintaining a good credit report is essential. Besides lenders, others may use credit report information, such as insurance companies, landlords, and employers, to make decisions critical to your financial success.

The same process occurs every time you apply for a new loan. However, if you have made timely payments on other loans, there is an increased likelihood of getting more, and cheaper, credit in the future. But if you have missed payments or have been consistently late making payments, this will also be included in your credit report (see **Helpful Hint**).

Contents and Accessibility of a Credit Report

As you can see from the Great Buy example, the information that goes into your credit report comes primarily from current **creditors**, which are firms that you have borrowed money from. It is possible, though, for other public data to find its way into your report.

- Some of the additional information in credit reports comes from credit applications that you submit and that contain employment information and addresses.
- Other information comes from public legal records such as bankruptcy filings, court-ordered liens, or court judgments.
- If you were to look at your own report, it might look similar to **Illustration 5.4.2**, but note that each credit bureau has its own format.

ILLUSTRATION 5.4.2 **Information Shown in a Credit Report**

Credit Report

First Name	Middle Name	Last Name
Jane	N/A	Smith

Address	City	Zip Code
123 Address Place	Anywhere	12345-0987

Phone Number	SSN	Marital Status
(123) 456-7890	*** *** ****	Single

Summary of Current Accounts
Name of creditor, credit limit, last reported balance, date opened, type of debt, amount of monthly payment, payment history, repayment period, date account closed.

Credit Account Information

Company Name	Credit Limit	Date Opened	Monthly Payment	Balance	Payments
Pine Tree Bank	$1000	07/2010	$50	$0	On-time
Car Finance	$2000	01/2014	$110	$200	Late
Department Store	$500	05/2017	$30	$0	On-time

Negative Items
Accounts sent to collections, accounts with past due payments, accounts that were charged off by the lender (deemed uncollectible), repossessions, foreclosures, bankruptcies, liens, and judgments.

Public Records

Hospital Collections
Date reported: 09/2015, Assigned: 04/2014. Client: Anywhere City Hospital. Amount: $1150. Unpaid Balance: $750. Date of Last Activity: 11/2015.

Inquiry History
Inquiries resulting from a transaction you initiate (credit application). Other inquiries made by potential lenders, employers, insurers, and others. You requesting your own credit report for review.

Companies That Requested Your Credit Report

03/05/2013	Pine Tree Bank	01/09/2017	Car Finance
12/14/2013	Credit Card	10/21/2018	Appliance Store
09/23/2015	Anywhere City Hospital	05/17/2020	Department Store

Personal Statement (Optional)
Statement submitted by the individual to the credit bureau providing additional circumstantial information about accounts and other information.

Personal Statement

Debtor has successfully completed a voluntary repayment plan of outstanding debts submitted by Hospital Collections.

Accessibility of Content

Thankfully, the federal government limits by law who may access your credit report. As the law is currently written, employers are the only ones who must provide you with a disclosure stating that a credit report will be requested, and they must also obtain your written authorization to do so. Further, if employers use the information in your credit report to deny you a job, they must provide you with a copy of the report and give you a summary of your rights related to the report. Under current law, an individual, firm, employer, or governmental agency may request your credit report from a credit bureau for one of the following purposes:

- In connection with any credit or collection transaction.
- For employment purposes.
- For the underwriting of insurance (for example, the purchase of a life insurance policy).
- For determining your eligibility for a license.
- To check your history before starting a business with you.
- To review whether current credit should continue to be extended to you.
- To meet a court order.
- To determine eligibility to rent or lease housing.

Who would have thought that one report could have such a huge influence on shaping your lifetime financial journey? Here again, you can see why it's important to manage your

credit history and keep a close eye on your credit report. If managed well, your credit report will open many financial opportunities in the future. If managed poorly, many of these opportunities will be lost.

Possible Inaccurate and Negative Contents

So how do all of the different types of financial information actually get into your credit report? The answer may surprise you. The system that exists today is tied directly to your Social Security number. As you can imagine, it is possible for inappropriate and incorrect information to flow into your report. This can happen if a clerk accidentally inputs your Social Security number on another person's account information, which causes his or her account information to be tied to your credit report. It can also happen as a result of **fraud**, which is when another person intentionally steals from you.

Assuming that the information in your credit report is accurate, you need to know that credit reporting agencies are allowed to maintain bankruptcy information in your report for 10 years. Other negative information about you can stay in the report for up to 7 years. Information that can stay in your report forever includes:

- Borrowing more than $150,000.
- Owning a life insurance policy with a **face value** (the amount that will be paid in the event of death) of $150,000 or more.
- Applying for a job that pays more than $75,000 annually.

Analyzing Your Credit Report

Accessing Your Credit Report

HELPFUL HINT

The U.S. Federal Trade Commission website offers several free resources such as sample letters for disputing errors on your credit report.

How do you find out what is in your credit report? The good news is that the **Fair Credit Reporting Act (FCRA)** requires Equifax, Experian, and TransUnion to provide you with a free copy of your report once every 12 months. You really ought to get a copy just to make sure that everything in your report is accurate. Credit reports can have errors. If you find an error on your credit report, you should contact the credit bureau to have the information corrected (see **Helpful Hint**).

If you're still in school, you should request a copy of your credit report to see if you have one. If you find out that you do not have a credit report, take steps now to establish a clean credit report before graduating. Remember, some employers use a credit report as an employment screen and not having a report can be just as bad as having one with negative information. (To establish a credit history, you will need to obtain credit, which we'll discuss in another topic.) Getting a copy of your credit report is as simple as following these steps:

1. Gather the following information:
   a. Name.
   b. Addresses for the past 2 years.
   c. Social Security number.
   d. Date of birth.
   e. Payment information, such as student loan or car loan payment.
2. Go to www.annualcreditreport.com.
3. Input your personal information and request your credit report from each of the credit bureaus.
4. Print out your credit report from each of the credit bureaus and keep it in a safe place.

Identity Theft

One reason to request your free credit report is to guard against identity theft. **Identity theft** occurs when someone else uses your personal information, such as your name and Social Security number, to obtain credit. Rather than robbing you directly, these thieves take advantage of your creditworthiness by applying for loans in your name (e.g., credit cards), buying things, and then

not repaying the loans. When the damage is done, the negative information is passed along to the credit bureaus in your name! In effect, you are left looking like a bad credit risk (see **Helpful Hint**).

If you find that you are the victim of identity theft or a credit scam:

- Write to each of the credit bureaus directly, telling them that the information is inaccurate. This forces the company to investigate the fraud within 30 days. A fraud alert can be added to your credit file; this will alert creditors to be more cautious when dealing with your credit file.
- At the same time, write to the merchant(s) and dispute any items purchased that you did not buy.
- If these actions do not work, contact the Federal Trade Commission and your state Attorney General's office.
- You can also report the crime to local law enforcement.

HELPFUL HINT

You can freeze your credit report, which makes it very difficult for a thief to open an account in your name. Call each credit bureau to freeze your account. The cost is $10–$15.

Concepts in Action

You decide to apply for a job as a cashier at a nearby grocery store. Because you will be dealing with money and customer credit cards, the employer has decided to request a copy of your credit report. You agree to this and sign a permission form giving the employer the ability to obtain your credit report. Much to your dismay, the employer contacts you saying that he or she will not hire you because of negative information in your credit report. Because you have had only one credit card in your life and you have always made the payments on time, you are completely surprised by this. What should you do?

Solution

The Fair Credit Reporting Act requires that if you are denied employment based on details within the report, the employer must disclose this information to you and provide you with information to resolve problems in your report. You should also obtain free copies of your credit report from all three of the major credit bureaus at www.annualcreditreport.com. Once you're aware of all of the errors on your credit report, you will need to submit a dispute letter to each of the credit bureaus reporting the inaccurate information. If fraud is a concern, you can also request that a credit freeze be placed on your accounts for a small fee. This will lock any access to your account unless a valid secret identification number is provided. This means that even if you apply for credit, it will be rejected unless you call the credit bureaus in advance and give them your secret password to temporarily unfreeze your credit report.

End-of-Topic Assessment

Multiple-Choice Questions

1. A credit report is best defined by which of the following statements?
   - **a.** A score that represents your credit reputation.
   - **b.** A summary of an individual's credit history.
   - **c.** A compilation of all public and private records relating to your finances.
   - **d.** An accounting of legal action taken against you to collect debts.

2. Which of the following events will trigger the creation of a credit report?

   I. Declaring bankruptcy.

   II. Taking out a student loan.

   III. Borrowing money from a company.

   IV. Marriage or divorce.
   - **a.** I, II, III, and IV.
   - **b.** I and III only.
   - **c.** II and III only.
   - **d.** I, II, and III only.

3. The three primary national credit bureaus are:
   - **a.** TransUnion, Equifax, and Experian.
   - **b.** Experian, Sallie Mae, and TransUnion.
   - **c.** Fair Isaac, Equifax, and Experian.
   - **d.** FICO, Equifax, and Sallie Mae.

4. A credit bureau is a company that maintains the following information on individuals':

a. housing.
b. credit.
c. both housing and credit.
d. neither housing nor credit.

5. A credit report contains all of the following information *except* an individual's:

a. race.
b. household income.
c. marital status.
d. Social Security number.

6. Most of the information contained within a credit report is reported to credit bureaus by:

a. individuals.
b. employers.
c. federal and state government agencies.
d. creditors.

7. Which of the following statements regarding access to individual credit reports is most accurate?

a. Anyone with someone's Social Security number can request that person's credit report under the law.
b. All employers can request an applicant's credit report without the applicant's knowledge.
c. Insurance companies can view a customer's credit report when underwriting insurance policies.
d. Individuals are not allowed access to their personal credit reports unless they have been denied credit, employment, or insurance as a result of a credit check.

8. How many times per year can you request a free copy of your credit report from each of the primary credit bureaus?

a. One time.
b. Two times.
c. Three times.
d. As many times as you want.

9. One important reason to review your credit report, at least annually, is to guard against:

a. bankruptcy.
b. becoming over-indebted.
c. high-interest-rate loans (high-cost debt).
d. identity theft.

10. To correct inaccurate, fraudulent, or other erroneous information on your credit report, which of the following is the best course of action?

a. File a defamation lawsuit against the credit bureau reporting the inaccurate information.
b. File a complaint with the Federal Trade Commission.
c. Contact your creditors and notify them of the error.
d. Contact the primary national credit bureaus by writing a letter and notifying them of the inaccurate information.

Adventures in Personal Finance

Short Answer

1. List four things that your credit report can tell lenders about your financial behavior.

2. List three things that are *not* in your credit report.

3. Some negative items in a credit report can stay for a long time. If an individual files for bankruptcy protection, how many years will that bankruptcy filing stay on his or her credit report? How long do other items (good or bad) stay on a person's credit report?

4. Credit reports may vary from one credit bureau to another. What might cause this variation? Is the variation good or bad?

Explore

1. Go to www.annualcreditreport.com and request a free copy of your credit report. Be sure to check that the information in the report is accurate, complete, and up to date. What should you do if any information needs to be corrected or is missing?

2. Go to one of the three national credit bureau websites and research ways these firms recommend building credit. What are two potential ways that most students can build their credit?

Expanded Learning Activity

Writing **Presentation** Visit the **U.S. Federal Trade Commission** website on consumer scam alerts. Search through the listing of credit and financial scams and find five that relate to credit reports and credit history. Write a one-page summary describing the shared aims of these scams and frauds. Be sure to share your findings with others in class.

Credit Scores

LO 5.5 Describe how credit scores are developed, calculated, and used.

Are you a bad credit risk? Let's hope not! People are a bad **credit risk** if they have a history of not repaying their loans and other financial obligations in a timely manner. All of your borrowing behavior is recorded in a credit report. Recall that **credit reports** are used by merchants, lenders, rental agencies, employers, businesses, and governmental organizations as a tool to determine who is, and who is not, a good credit risk.

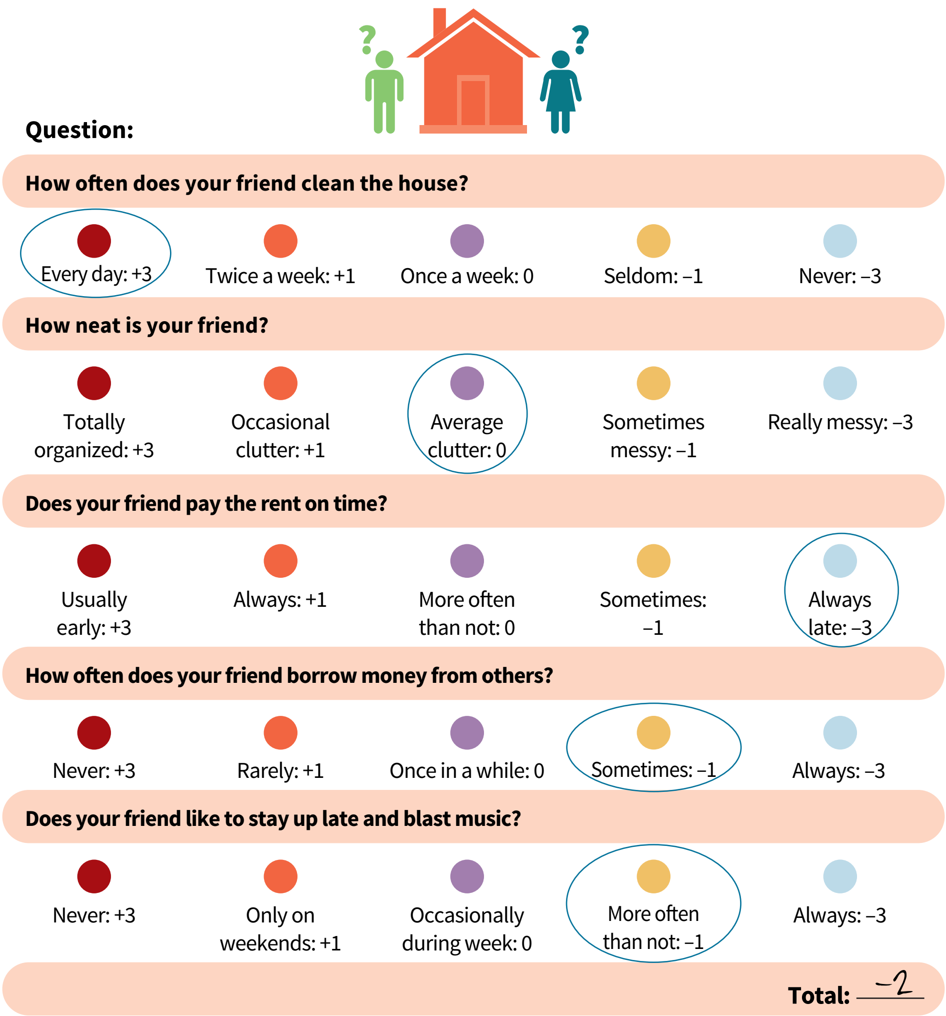
Typically, the information within a credit report is analyzed and then reduced into a number. This number is known as a credit score. In this topic, we discuss why it's important to know how credit scores are calculated and used.

The Purpose of Credit Scores

A **credit score** is merely a tally that summarizes a person's credit risk. You can think of a credit score as a predictor of loan repayment behavior. To help you better understand credit scores, consider the following example. Let's say that you are looking for a new roommate. You think one of your friends would be a great fit, but you're worried that if you're not compatable it will ruin your friendship. To help determine the roommate "risk," you complete the questionnaire shown in **Illustration 5.5.1**.

ILLUSTRATION 5.5.1

Roommate Risk Questionnaire



After looking at the roommate score (a negative score is problematic), you come to the conclusion that your friend is a bad risk—at least in terms of roommate status. Based on this analysis, rooming with your friend might be a risky move.

Of course, this example provides an analogy to credit scores. Keeping things clean and neat is similar to saying that someone has a good income and repayment history. The other credit score items relate to the history of borrowing money wisely, making timely payments on money borrowed, and not being overextended financially. The more positives, the higher the score.

Developing Credit Scores

Within the financial world, credit scores are used—similar to the roommate risk score—as a way to predict which people are likely to manage their debt wisely in the future. The most widely used credit score was created by **Fair Isaac Corporation**, referred to as a **FICO® score**. Each of the major credit bureaus uses a FICO score although each may use a different title (for example, **Equifax** calls its score a **BEACON® Score**). FICO scores can range from a low of 300 to a high of 850. Having a higher score means that you have a lower credit risk and are therefore more likely to be approved for a loan.

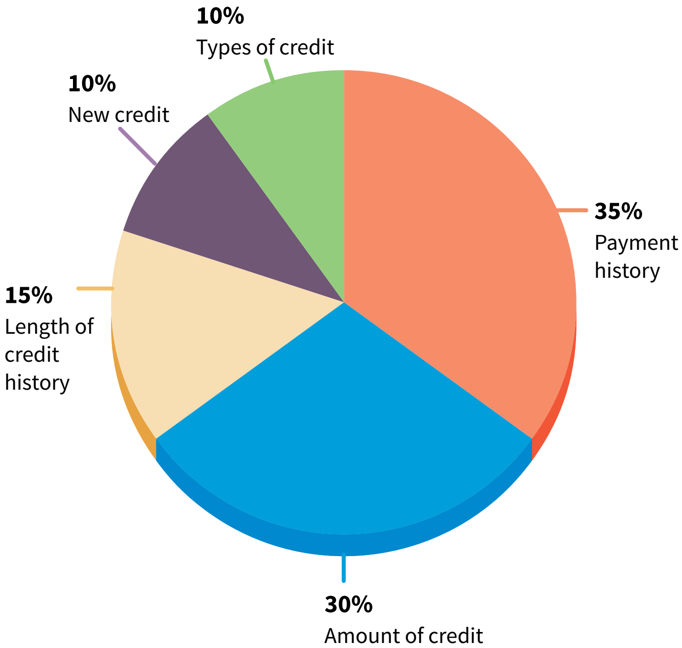
HELPFUL HINT

Be assured that there are some things that have no impact on your credit score. These include your age, race, sex, marital status, religion, medical history, criminal history, occupation, and nationality.

How FICO Scores Are Calculated

Although the FICO score formula is a corporate secret, we do know how scores are generally calculated. As shown in **Illustration 5.5.2**, your credit score is built using five inputs: payment history, amount of credit, length of credit history, new credit, and types of credit (see **Helpful Hint**). The first three inputs are the most important in determing your credit score.

ILLUSTRATION 5.5.2 Inputs Influencing a FICO Score



Payment History. The first input—payment history—makes up the largest portion (35%) of your FICO score.

- Essentially, lenders are looking for individuals who make on-time payments on credit cards, department store credit cards, retail accounts, mortgage loans, and installment loans for things such as cars, boats, and motorcycles.
- The credit rating agencies rely on lenders to report late payments.
- Credit rating agencies also search public records for delinquent payments that might not be reported, such as being late with utility bills and having a lien placed against a home or a car.

Amount of Credit. The amount of credit someone currently has accounts for approximately 30% of a person's FICO score. This gets a little tricky, but in general, a high **credit limit**—the maximum amount you may borrow—is a good sign. This can turn negative if you have used a large percentage of your available credit limit. To maximize a FICO score, it is best to use some, but not all, of your credit (see **Helpful Hint**).

HELPFUL HINT

Consumers who have no outstanding balances sometimes have a lower score than those who have a small revolving balance in comparison to their overall credit limit.

Length of Credit History. Your length of credit history is the third input of a FICO score (15%). The longer you have had an account, the better your score. This is the reason some consumer advocates recommend keeping a credit card active even if you rarely use the card.

New Credit. Applying for new credit or just receiving new credit can decrease your FICO score in the short run.

- Although this accounts for only 10% of your overall score, once your credit record is established, you should apply for additional credit prudently and only when you really need the credit.

- The reason this is a negative input is that other lenders may become worried that your overall ability to make payments across all of your credit lines will fall when new lines of credit are established.
- For example, if you are shopping for a car and you allow the dealerships to run a credit report on you every time you test-drive a vehicle, your score will drop each time there is an inquiry. The good news is that similar inquiries that occur within a 14-day window will generally only count as one inquiry when calculating your overall credit score.

Types of Credit. Types of credit make up the remaining 10% of a FICO score. To have the highest credit score possible, you need a mix of credit types. **Revolving credit** includes credit cards (think Visa®, MasterCard®, and Discover®). **Installment credit** includes student loans, mortgages, personal loans, and car loans. The big difference between the two types of credit is that the monthly payment on a revolving line of credit can vary, whereas installment loan payments tend to be fixed.

How to Establish a Credit Score

You need two items to have a credit score:

1. **You must first have a credit report on file with one of the major credit bureaus.** If you're in college right now and have a student loan, you probably already have a credit report and a credit score. You should check your report immediately. You can do this for free once per year by visiting www.annualcreditreport.com. If you find that you don't have a credit report, you might want to apply for a credit card. You don't have to use the credit card often or load up on debt. Just having a credit card for a period of time will lead to establishing a FICO score, which might come in handy later in your financial journey (assuming you manage your credit wisely).
2. **You must have a record of recent credit use.** This means that you should have at least one open line of credit that has been in existence for 6 months.

It is important to remember that just having a credit card is generally not enough to prompt the development of a high credit score. Basically, you must do something with the line of credit to provide the credit bureau with information about your credit use and debt-management skills. This happens when you make a purchase.

- **Unsecured debt** is money borrowed to purchase goods and services that are generally consumed quickly, such as using your credit card to buy groceries (see **Helpful Hint**).
- This compares to **secured debt** that is used to buy things like cars and homes.
- These secured assets can be taken back by a lender if the debt is not repaid. Items purchased with unsecured debt typically cannot be **repossessed**.

HELPFUL HINT

In 99% of all cases, you should pay off all unsecured debt on a monthly basis.

The Credit Reporting Process

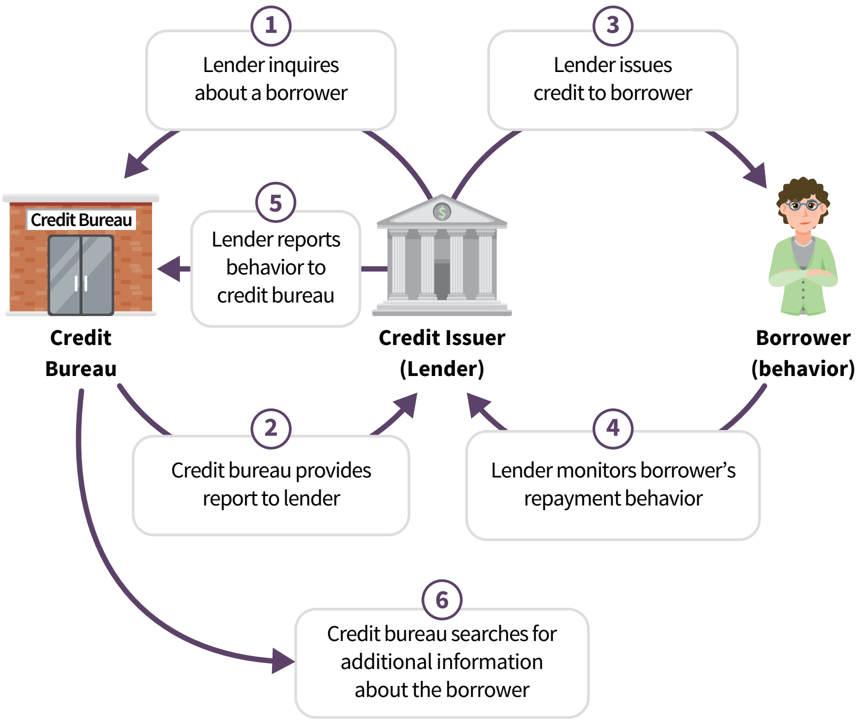
There are three primary credit bureaus in the United States: **Equifax**, **Experian**, and **TransUnion**. These firms gather information that they then use to develop a credit report about you. These credit bureaus then sell your report to lenders, employers, companies, and others who have a commercial or business reason to evaluate your creditworthiness.

Credit bureaus obtain information about you from businesses that have loaned you money in the past. The list includes credit card companies, banks, credit unions, finance companies, and mortgage companies. In addition, credit bureaus scan public records for information about people in their files. This is the reason that your credit report and credit score may differ from one credit bureau to the next.

The credit reporting process is shown in **Illustration 5.5.3**. As the illustration highlights, the process involved in the development of a credit report is complex. The information flowing back and forth between lenders and a credit bureau can be immense.

ILLUSTRATION 5.5.3

The Process of Developing a Credit Report



Building a Favorable Credit Score

HELPFUL HINT

Insurance companies set rates you pay for life, auto, and homeowner's policies based in part on your credit score.

Before reviewing strategies designed to help you build a favorable credit score, it's important to understand why a credit report and credit score are so important in the 21st century.

- Lenders, insurance companies, employers, and landlords all use credit reports and scores to determine how you manage money (see **Helpful Hint**).
- Your money-management skills are a predictor of your overall pattern of responsibility.

If you already have a credit report, there are a few things you can do to make sure that your score is high. FICO scores range from 300 to 850, with high scores representing people with the lowest risk of failing to make a loan payment. Although there are no hard and fast rules, you can use the following guidelines to determine the quality of your credit history:

- 300–550: A score this low is really bad, which will usually lead to rejections for new credit.
- 550–620: This range is considered subprime, which indicates a high-risk borrower. A score in this range means the lender will charge high interest and high annual fees, and limit the amount of credit issued.
- 620–680: This range represents the minimum score needed to be accepted for most loans.
- 680–740: This range represents what lenders consider to be individuals with good credit. The terms and conditions of a loan will be relatively favorable.
- 740–850: A score this high is considered excellent. These borrowers have stellar previous payment histories and always receive the best borrowing terms.

To boost your credit score, be sure to request a copy of your credit report annually and make sure that there are no mistakes within the report. Take special care to keep your owed balances low, and if at all possible, pay off your revolving credit (credits cards) every month. Do not open credit accounts unless you really need the credit or you are attempting to balance your mix of credit between revolving and installment loans. If you do need credit, shop around among banks, credit unions, and other lenders. Finally, pay all of your bills on time.

If you're just now beginning to take steps to establish a credit report, start with one credit application. Don't try to open several new accounts at the same time or even within a few months. Here is a strategy that you might consider:

1. Open a line of credit; for example, apply for and obtain a credit card.
2. Buy necessary items like groceries and gas.
3. When you receive your first monthly statement, pay off the entire balance due.
4. Repeat this process each month to keep the account active over time.

Yes, it really is that simple. If you make timely payments and act responsibly, you will be offered additional credit in the future. You can move from not having a credit report—and basically a really low credit score—to a good or even excellent score (see **Helpful Hint**). The credit bureau will probably interpret your borrowing behavior, that is, your ability to make a purchase using credit and then your capacity to make timely payments, quite favorably.

HELPFUL HINT

Several companies, such as Credit Karma and Mint.com, offer credit score tools and credit scores for free.

How Credit Scores Are Used and Updated

Okay, so now you know the importance of having a credit report and a high credit score. It's worth mentioning again that a credit report summarizes your credit risk in the marketplace. Nearly every lender and merchant that extends credit uses a credit score to determine:

- If they will issue you credit.
- How much credit they will grant you.
- What interest rate they will charge you on the money borrowed.

The lower your score, the less likely that you will be offered credit. For those who do receive an offer of credit, a higher credit score will result in a larger credit line and a lower interest rate. A **credit line** refers to the maximum amount that can be borrowed. For example, a credit card issuer will indicate the maximum amount that can be borrowed at any time, say $5,000. Once this credit line or limit has been reached, the card will be denied by a merchant.

Changes to Your Credit Score

Your credit score is regularly updated based on your most recent credit report. Recall that a credit report contains four primary elements:

1. **Personal information:** Your name, birth date, Social Security number, and address.
2. **Summary of accounts:** All open lines of credit and outstanding debt.
3. **Inquiries:** A list of lenders who have looked at your credit report over the past 2 years. Credit inquiries, such as loan applications, are often referred to as **hard inquiries**. Credit inquiries made by lenders to prescreen customers when making "preapproved" credit offers, which are not initiated by the consumer, are referred to as **soft inquires**. Soft inquiries do not count against a credit score, but hard inquiries do.
4. **Negative items:** A summary of items like missed payments and overdue notices, and any public record information, such as bankruptcies, foreclosures, tax liens, garnishments, and legal judgments.

A change in any of these items will result in an update to your report. Sometimes these changes are not accurate.

- If you think your credit score is high and you are turned down for credit, there might be a mistake in your report that needs to be fixed.
- Before getting overly stressed, request a free copy of your credit report within 30 days of being denied credit. This is your right under the law.

- There may be notes in the report explaining why you were rejected. You can use these notes to improve your future behavior. If there are no notes, or the notes are wrong, you can take steps to correct the information.

If you find a mistake, you can request that the credit bureau investigate the matter.

- By law, the bureau has 30 to 45 days to complete an investigation.
- They will remove any inaccurate data from your file.
- If the bureau finds nothing wrong, you may, by law, dispute their findings and add a note of explanation to your credit file. You must write a letter—not an e-mail or text—including your full name, address, and the company and account number(s) in question. Your letter should also include documentation of your side of the story and attempts to resolve the issue.
- The credit bureau must then go to the lender and obtain their side of the story. If the lender fails to act, the information must be removed from your credit report (see **Helpful Hint**).

HELPFUL HINT

If the situation is still not resolved, you may include a 100-word statement in your credit report. The statement will remain in your file for 7 years and be included in all credit reports sent to lenders, employers, and others.

Optimizing Your Credit Score

The largest factor in shaping your credit score is whether you make debt payments on time. Try never to miss a payment. If you do miss one, get and stay current as quickly as possible. Next in importance is how much money you owe. It is not strictly the amount of debt but how the amount owed is organized. Here are some basic rules to follow to optimize your credit score:

- **Keep revolving debt balances low.** This means you should pay off as much of your unsecured debt as you can on a monthly basis.
- **Apply the ratio rule.** Lenders look at the total amount of credit lines available to you and compare that to how much you have used. This is called the **credit usage ratio**. Say, for example, you have three credit cards with a total line of credit equal to $10,000. If you have an unpaid balance (revolving credit line) of $5,000, your ratio is 50% ($5,000 balance ÷ $10,000 credit limit). Someone whose unpaid balance is more than 30% of their total credit limit would likely have a lower credit score because the ratio is too high. Lenders don't like high ratios because they fear that the borrower may be **overextended**—unable to make minimum payments in the future. On the other hand, having tens of thousands of dollars of available credit may also be considered risky because at any moment the borrower could incur large debts. Tens of thousands of dollars of available credit can also be viewed negatively by lenders when applying for other loans. Basically, don't carry a balance and avoid having excessive available credit.
- **Avoid applying for lots of new credit cards at one time.** Individuals with a longer positive credit history tend to have a higher credit score. Opening new credit lines can decrease your score, as can having a flurry of credit (loan) applications. Scores will drop because other lenders will see that you may be on the verge of going into more debt in the future (see **Helpful Hint**).
- **Vary your credit mix.** Someone with 10 credit cards and no other credit will have a lower score than someone with a blend of credit cards, car loans, student loans, and other accounts. This will likely happen naturally over time as you may have a need for student, auto, and housing loans.

HELPFUL HINT

It is a great idea to shop around among lenders to get the best rate possible on new loans. Although many credit-scoring models frown upon rate shopping, getting the best loan rate is well worth the small negative impact it may have on your credit score.

Other credit-scoring models exist in the marketplace. Lenders and credit bureaus, such as **VantageScore®**, incorporate additional information into the calculation of an individual's credit score. This makes it possible for even more individuals to have a credit score and receive credit. However, as a consumer, the same good borrowing behavior rules apply. These include making payments on time, keeping your debt-to-credit ratio low, having a mix of loans, having a long credit relationship, and keeping the amount of overall debt low. Regardless of the credit-scoring model in use, these practices will help you achieve a good credit reputation.

Concepts in Action

Your friends Luis and Alexi ask you for help. Luis is age 45 and married. He and his wife have a combined household income of nearly $100,000, but neither he nor his wife currently has a credit card. Luis did have a student loan, but he paid that off several years ago.

Alexi is age 35 and single. He works with Luis and earns approximately $65,000 per year. Since graduating from college, he has purchased several new cars using bank loans. In addition, he has had the same credit card he received in college as an undergraduate student. He rarely carries a revolving balance on the card. There is one other thing to know about Alexi: He likes to shop and has several store credit cards that he pays off on a monthly basis.

Luis and Alexi have both recently been approved for a loan by the same credit union to purchase nearly identical cars, but Alexi's loan has a lower rate of interest. Luis was mad when he found out and wants to know why this difference occurred.

Solution

You explain to Luis and Alexi that the interest rate on their loans most likely reflects their credit scores and that Alexi probably has a higher score. Although Luis is probably an ideal borrower, his credit report doesn't show this. He needs a better mix of credit in his report to improve his credit score. He could start by obtaining a credit card, possibly from the bank where he is getting the car loan. By combining revolving (credit card) and installment (auto loan) credit, paying off the credit card monthly, and continuing to engage in responsible financial behavior, his credit score should increase over time. In a year or possibly less, Luis may be able to apply for another loan with better terms and pay off the existing loan.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following statements best describes the relationship between credit scores and credit riskiness of borrowers?

- **a.** Higher credit scores are associated with higher credit risk.
- **b.** Higher credit scores are associated with lower credit risk.
- **c.** Lower credit scores are associated with lower credit risk.
- **d.** Credit scores and credit risk are unrelated.

2. Which of the following is *not* used to estimate a credit score?

- **a.** Marital status.
- **b.** Age.
- **c.** New credit inquiries.
- **d.** Both age and marital status are correct.

3. When reviewing personal information, which of the following is included in credit-scoring models?

- **a.** Gender of individual.
- **b.** Race of individual.
- **c.** Public record information.
- **d.** All of the answer choices are correct.

4. Which of the following credit inputs is the least important when a FICO score is developed?

- **a.** Length of credit history.
- **b.** Amount of credit.
- **c.** Payment history.
- **d.** Types of credit.

5. Raul has had a credit card since college. Overall, he has managed his credit history well, although he has occasionally made a late payment on his credit card. Given this information, which of the following FICO scores is Raul likely to receive?

- **a.** 350.
- **b.** 825.
- **c.** 640.
- **d.** 790.

6. Individuals with low credit scores are more likely to be:

- **a.** charged higher interest rates on loans.
- **b.** offered new low-cost credit cards.
- **c.** charged higher insurance premiums.
- **d.** charged higher interest rates on loans and pay higher insurance premiums.

7. All of the following statements regarding credit inquiries are true, *except*:

- **a.** hard credit inquiries generally have a negative impact on credit scores.
- **b.** soft credit inquiries generally do not affect credit scores.
- **c.** when an individual requests his or her own credit report, it is considered a hard inquiry.
- **d.** hard credit inquiries generally have a negative impact on credit scores, but soft credit inquiries generally have no effect.

8. Which of the following events can lead to a lower credit score?

- **a.** Filing for bankruptcy.
- **b.** Making one or more late payments.
- **c.** Frequently moving residences.
- **d.** All of the answer choices are correct.

9. If you find a mistake in your credit report, which of the following may you add to your credit report?

- **a.** A 100-word statement describing the mistake.
- **b.** A letter notifying all creditors of your displeasure with your score.
- **c.** A 1,000-word rebuttal of the score.
- **d.** A proposed resolution of the mistake.

10. The FICO score has been the standard model for developing credit scores for many years; however, new credit-scoring models are being developed. In relation to this, which of the following statements is *true*?

- **a.** Because of multiple credit-scoring models, consumers have a difficult time knowing which behaviors matter most when trying to improve credit scores.
- **b.** Multiple credit-scoring models make it much more difficult to improve credit scores.
- **c.** Multiple credit-scoring models make it more difficult for individuals who have never had credit to receive a loan for the first time.
- **d.** The same good credit behaviors, such as on-time payments and low debt-to-credit ratios, will lead to good credit scores regardless of the credit-scoring model.

Adventures in Personal Finance

Short Answer

1. List the three most significant factors when calculating a credit score. Which factor counts the most? Which is most easily changed?

2. What is a basic and effective strategy to developing a great credit score in a relatively short period of time if no credit report exists?

3. List and briefly describe three ways credit scores are used in the marketplace.

Explore

1. Search the Internet using the following key words: "understanding your FICO score." Find the PDF document published by **Fair Isaacs Corporation**. Use this document to create a list of five strategies that can be used to improve a FICO score.

2. **Writing** Conduct an Internet search to determine how to correct an error on a credit report. Write a brief summary of a consumer's rights under the Fair Credit Reporting Act. Be sure to note the steps a consumer must take, and when the steps must be taken, to dispute an error.

3. If you have not already done so, request a copy of your free annual credit report by visiting www.annualcreditreport.com. This is the only website that is linked to the three major credit reporting agencies and FICO scores, and authorized by federal law. Once you get a copy of your report, answer these questions: What is the oldest credit account that is still open? How old is it? What is the newest credit account that you have? How new is it? Do you have a variety of credit, or is there just one type of credit showing on your credit report?

Expanded Learning Activity

Groupwork Within your class, split into teams. Work with your teammates to develop your own financial-scoring system. Your scoring technique should include at least five categories of personal financial-management skills and attributes. Once you have developed your categories, build a scoring system that allows you to add up scores or create a weighted score. For example, you may decide that someone who has a part-time job should score higher than someone who does not work. Focus your team's efforts on financial-management topics. After all teams have finished, compare team results. What scoring factors are similar among the teams? What are some of the differences? How closely do the results from this exercise match the factors used to develop a FICO score?

Credit Cards

LO 5.6 Explain the role of credit cards as a financial-management tool.

Nearly everyone loves a campfire and cooking food on an outdoor grill. Fire is incredibly useful and even lifesaving at times. Fire helps with cooking, warmth, comfort, and fun, such as roasting marshmallows with friends or grilling food outdoors with family. Fire can enhance life, but it can also be incredibly destructive if it gets out of control.

In your financial journey, you will have the opportunity to use many financial tools that can make your life more convenient, such as a credit card. A **credit card** is a loan that can be used at the borrower's discretion and convenience and has flexible repayment options. Credit cards are nearly essential when renting cars, reserving hotel rooms, or booking airline and other travel tickets. Responsible use of credit cards can also help build your credit score so that it will be easier to qualify for other loans, such as auto loans and mortgages. Similar to fire, however, if individuals become careless or reckless in their use of credit cards, they can suffer serious financial difficulties. In this topic, we discuss some key concepts related to credit cards. The information presented here will help make credit cards a useful tool over your lifetime financial journey.

Characteristics of Credit Cards

As a Type of Loan

With traditional loans, the lender gives the borrower, if approved, money. The borrower then begins to make payments to the lender to repay the money borrowed plus interest. Traditional loans are typically **amortized loans**, meaning that the borrower makes fixed payments for a set period of time until the loan is paid off. Thus, the loan balance is always decreasing with each payment because the money cannot be re-borrowed. Traditional loans are an example of **closed-end credit**. In other words, if all payments are made on time, the borrower knows exactly when the loan will be paid in full.

Credit cards are different in that they are not a traditional loan. Credit cards are a type of a **line of credit**. Some consumer advocates refer to credit cards as **revolving loans** or as **open-end credit**. A line of credit is a type of loan that the borrower can:

- Access at any time.
- Make adjustable payments on the loan to decrease or pay off the balance.
- Borrow the money again without having to reapply for a loan from the lender.

As **Illustration 5.6.1** shows, a credit card loan can be paid-off in full each month and then borrowed in full the following month without having to seek lender approval.

ILLUSTRATION 5.6.1 Credit Card Borrowing and Repayment Cycle

March 1: Credit Card Balance

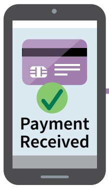
Account Summary	
Previous balance	$0
Payments	$0
New purchases	$0
New balance	$0

March 3: Use Credit Card

March 23: Received Credit Statement

Account Summary	
Previous balance	$0
Payments	$0
New purchases	$30
New balance	$30

March 27: Make a Payment



April 1: Credit Card Balance

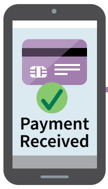
Account Summary	
Previous balance	$30
Payments	$30
New purchases	$0
New balance	$0

April 7: Use Credit Card

April 23: Credit Card Balance

Account Summary	
Previous balance	$0
Payments	$0
New purchases	$60
New balance	$60

April 25: Make a Payment



May 1: Credit Card Balance

Account Summary	
Previous balance	$60
Payments	$60
New purchases	$0
New balance	$0

Understanding Credit Card Terms

Illustration 5.6.2 provides a list of key terms associated with credit cards, accompanied by a brief definition.

When applying for a credit card, you can pay off the credit card in full each month or carry a balance from one month to the next. You should always try to pay off the total balance on a card each month. Otherwise, the interest payments can really add up!

For example, let's say you plan to carry a balance on your credit card each month as you work to pay it off. In this case, you must consider the APR of your selected credit card—as well as any required fees—extremely carefully. Let's say you have a $1,500 balance on a credit card that charges a 23% interest rate. Let's also assume that the minimum payment on the credit card is calculated as 4% of the outstanding balance or $25, whichever is greater.

- If you make the minimum payment every month, it will take more than 6 years to pay off the bill!
- This means that you'll end up paying the credit card company more than $1,000 in interest in addition to the $1,500 that you borrowed.
- Instead, if you selected a credit card with a rate of 15%, you would pay off this same bill in 5 years and pay about $500 in interest.

Of course, if you carry a balance, you should try to make the highest monthly payment possible. If you could pay $135 per month, rather than the minimum payment, and the interest rate is 15%, you will pay the loan off in just 1 year and only pay about $125 in interest.

ILLUSTRATION 5.6.2 **Key Credit Terms and Definitions**

Term	Definition	Note
Annual percentage rates (APRs)	• **Standard APR:** The interest rate that applies to new purchases after any introductory rates have expired.	5% to 29.9%.
	• **Introductory APR:** The interest rate that applies only during an initial time period after opening an account.	0% to 2%.
	• **Balance transfer APR:** The interest rate that applies to balances transferred from another credit card(s) to this credit card.	0% to 29.9%.
	• **Cash advance APR:** The interest rate that applies to cash advances accessed from the credit card.	Typically the same as standard APR.
	• **Penalty APR:** The interest rate that applies when borrowers make late payments or exceed their credit limit.	20% to 35%.
Credit limit	The maximum amount that can be borrowed using the credit card. The limit can be exceeded with a single transaction if the borrower and lender agree. However, there are often significant penalties associated with exceeding the limit.	Based on credit score but typically \$300 to \$10,000.
Fees	**Account set-up fee:** one-time fee associated with opening a credit card.	Typically \$0 but can be as high as \$500.
	Annual fee: charged once per year by some credit card companies to keep the credit card active.	Most cards charge a \$0 fee; typical fees range from \$49 to \$999 per year.
Grace period	The amount of time allowed to pay a bill without incurring interest.	The Credit Card Act of 2009 requires a minimum 21-day grace period for new purchases.
Minimum payment due	The minimum payment due is the greater of a set minimum percentage of the outstanding balance, or some nominal payment amount, such as \$25. The credit card balance is used to determine the minimum payment.	The minimum percentage generally ranges between 2% and 4%. The lower the percentage, the longer the payoff period, which increases total interest paid.

The **Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (CARD Act)** requires credit card lenders to inform borrowers on their monthly statement how much they should pay each month to have their credit card paid in full within 3 years. The CARD Act also requires credit card issuers to inform borrowers in their monthly statements how much interest the borrower will pay if they only make the minimum payments (see **Helpful Hint**).

HELPFUL HINT

Congress is trying to equip borrowers with good information, but as a borrower, you have to put that good information to use and make the decision to pay off your credit card as quickly as you can.

Types of Credit Cards

Like most consumer products and services, credit cards come in all sorts of packages. Although most people first think of MasterCard®, Visa®, and Discover®, it's important to remember that there are other types of credit cards.

- Hotels, gas companies, and airlines issue credit cards, most of which are co-branded with a company like Visa®.
- Some credit cards are really **travel and entertainment cards**, such as American Express® and Carte Blanche®, which typically require cardholders to pay off their balance on a monthly basis (although American Express issues both credit cards and travel and entertainment cards).
- If you plan to pay off your credit card balance each month, you may want to consider **reward credit cards**, which provide benefits linked to how much the card holder purchases with their card. These benefits can include cash back, airline and hotel travel points, and other valuable benefits. These types of credit cards generally have higher interest rates and fees, as illustrated in **Illustration 5.6.3** (see **Helpful Hint**).

HELPFUL HINT

If you plan to carry a monthly balance, reward credit cards may not be a good choice because of their higher interest rates and fees. However, if you don't carry a balance, reward cards may be just as affordable as regular credit cards.

ILLUSTRATION 5.6.3

The Cost of Reward Cards

Concepts in Action

Your friend Arie has learned that you are studying about credit cards, and he has come to share his latest strategy with you. He has learned that cash-back credit cards will return 2% of your purchase amount that you charge on your credit card. He has decided to pay his tuition this semester using his cash-back reward credit card and then pay off the credit card during the summer when he is working full-time. Because Arie will spend $5,000 on tuition, fees, books, and other expenses this semester, he will receive $100 for using his credit card. What would you tell your friend?

Solution

This is a clever strategy, but it is fraught with pitfalls. First, many schools charge a convenience fee of 2% to 4% for paying tuition with a credit card. So although Arie may get back $100 from the credit card company, he will have to pay an extra $100 to $200 to the school. Second, reward credit cards charge high APRs and higher annual fees than regular credit cards, making it expensive to carry a balance on these cards. If the APR were 29% and it took Arie 5 months to pay off the balance, he would pay approximately $800 in interest!

Credit Card Payments

Calculating Monthly Minimum Payments

Calculating a minimum monthly payment is really easy.

- For example, if you have a $1,500 balance on a credit card with a 23% APR, you would multiply this by the multiplier used by your credit card issuer, which typically ranges between 2% and 4%.
- Let's assume it's 4%, so $1,500 × 0.04 would be $60, which is the minimum payment for the next month.
- As you pay down the outstanding balance, the minimum payment also decreases, which makes the loan repayment period longer and costs you more money!

This is why you never want to be in the habit of making only the minimum payment.

Calculating Monthly Interest

If you want to know how much you are paying in interest each month:

1. Take the 23% APR from the preceding example and divide this by 365 (0.23 ÷ 365); this equals 0.063%, which is the daily interest rate applied to outstanding balances.

2. Multiply $1,500 by 0.063% by the number of days in the billing cycle ($1,500 × 0.00063 × 30 days) and you get $28.35.
3. So, $28.35 of the $60 you are paying is interest. The remainder goes toward the balance.

Illustration 5.6.4 shows why you do not want to simply make the minimum payment. Assuming that you have a $1,500 balance, 23% APR, and your minimum payment is the greater of 4% of the outstanding balance or $25, then by only making the minimum payment it would take 6 years to pay it off! However, if you decided to pay about $141 per month, you would be able to pay off the outstanding balance in 12 months and save more than $800 in interest!

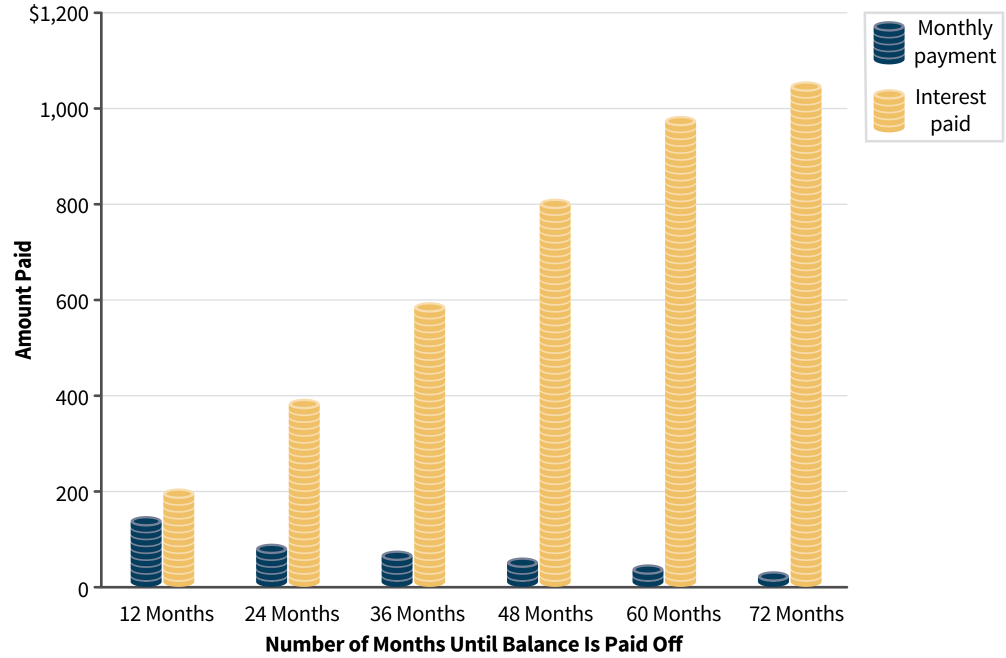


ILLUSTRATION 5.6.4

Length of Credit Card Payoff and Interest Paid on a $1,500 Balance at 23% APR

If you have a great credit score, many lenders will go out of their way to approve you for a new credit card (see **Helpful Hint**). As a borrower with good credit, you can shop the market and find the best value possible. Many credit cards offer 0% introductory APRs and relatively low APRs after the initial period. If you do carry a balance, shopping around can provide significant savings.

HELPFUL HINT

Most new credit cards now have a small metallic square chip on the front of the card. These chips reduce fraud by creating a unique code every time the card is used, which makes it is harder to steal card information.

Qualifying for a Credit Card

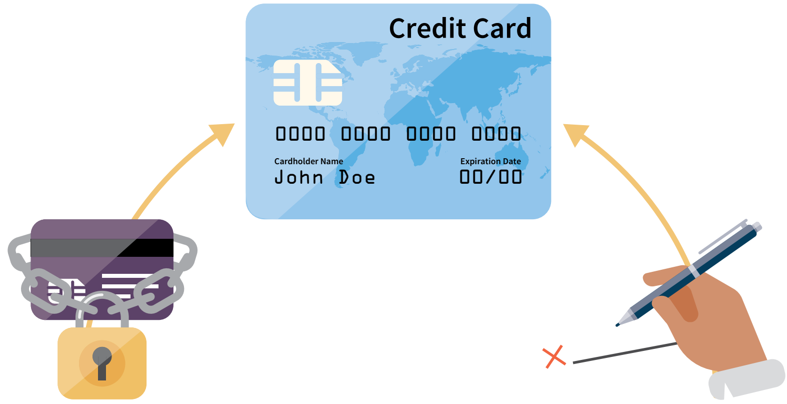
For many individuals, a credit card is the easiest way to establish a credit history. Ironically, many individuals are not able to qualify for a credit card because they lack sufficient credit histories and therefore do not have a credit score. However, there are several different ways in which an individual that does not have a credit history can still qualify for a credit card. Some credit card issuers have special student credit cards that are easier to obtain compared with a traditional credit card. If a student credit card is not available to you, the most common strategies, as shown in **Illustration 5.6.5**, are adding a co-signer or obtaining a secured credit card.

Adding a Co-Signer

A **co-signer** is an individual, in addition to the borrower, who will be held responsible for repayment of the debt. If a borrower lacks a credit history and has a lower income, lenders are much

ILLUSTRATION 5.6.5

Two Ways to Qualify for a Credit Card Without a Credit History



more willing to approve the application if there is a co-signer with a strong credit history that guarantees prompt repayment.

Let's say that Jake is trying to get his first credit card. He has no credit history on his credit report. As a result, he has been turned down several times by lenders when he has applied in the past.

- Jake convinces his older sister Isabella to be a co-signer on his credit card application.
- With Isabella as a co-signer, Jake is approved for a credit card with a $500 limit.
- Upon receiving his credit card, Jake immediately purchases a few small items.
- When he receives his credit card statement, Jake immediately pays off the full amount owed.

HELPFUL HINT

The prudent management of credit cards is a great way to improve your credit score.

In this way, Jake begins to build a good credit history (see **Helpful Hint**).

Now, say that Jake instead uses his credit card to pay off a couple of past due bills until he reaches his $500 credit limit. Unfortunately for Jake and Isabella, he is not able to make the next credit card payment.

- The credit card company then decides to call Isabella (because she is the co-signer and the person the lender feels is most likely to repay the loan). They tell her that the credit card bill has not been paid and that she is responsible for the payment.
- Isabella complains that Jake is the one who spent the money, not her, and that the lender should contact him.
- However, because she is the co-signer, the lender is entitled to demand payment from her (except in states not allowing this practice).
- If neither Jake nor Isabella repays the loan, both of their credit reports will likely be negatively affected. In addition, in most states, their wages could be garnished and other collection actions could be taken.

Isabella learned the hard way that to be a co-signer means being fully liable for someone else's loan. The lesson: Think twice before becoming a co-signer!

Obtaining a Secured Credit Card

There is an another way to obtain a credit card. Banks and credit unions offer financial products called secured credit cards, which provide a way for an individual to establish credit without having a co-signer. A **secured credit card** requires the borrower to deposit the full amount of the line of credit at the bank as collateral before the credit card is issued. To see how a secured card works, consider Xavier.

- Xavier has no credit history and knows it would be difficult to get a credit card. He does not want any co-signers, so he talks to his local bank about ways to establish credit.

- The bank tells Xavier that if he is willing to deposit $500 into an account and not have access to that money, then the bank will issue him a credit card with a $500 credit limit.
- Xavier agrees to this and begins to use the credit card for small purchases. He pays off the credit card in full each month. If Xavier misses a payment, the bank will deduct the money from the account and most likely close the line of credit.
- Xavier should verify with the lender that it is reporting his payment history to the credit bureaus.

Within a year, Xavier is able to qualify for a traditional credit card (because of his good credit history). He closes the secured credit card and receives his $500 back.

End-of-Topic Assessment

Multiple-Choice Questions

1. A credit card requires you to:

- **a.** make a fixed monthly payment until the loan is paid off.
- **b.** make a minimum monthly payment based on the outstanding balance.
- **c.** pay interest on all purchases.
- **d.** obtain approval from the lender before making a purchase.

2. Which of the following statements is *true* regarding credit cards?

- **a.** You may pay off a credit card balance at any time without penalty.
- **b.** If you pay off a credit card balance early, you will pay a penalty APR.
- **c.** You may not pay off a credit card balance unless you receive approval from the credit card company.
- **d.** You must make more than the monthly minimum payment to avoid paying interest.

3. The interest rate that applies when a borrower makes late payments is called a:

- **a.** credit limit APR.
- **b.** balance transfer APR.
- **c.** penalty APR.
- **d.** closed account APR.

4. Which of the following is closest to the actual average interest rate charged by credit card issuers?

- **a.** 5%.
- **b.** 9%.
- **c.** 12%.
- **d.** 19%.

5. Under the CARD Act of 2009, how many days do you have to pay your new credit card bill before the next payment is due? (*Hint*: This is the same amount of time you have to pay off any new balance before incurring a finance charge.)

- **a.** 10 days.
- **b.** 12 days.
- **c.** 21 days.
- **d.** 30 days.

6. Martie regularly flies Blue Sky Airlines. The airline offers a Visa® co-branded credit card that allows cardholders to earn points toward free flights. Cardholders also get to check one bag for free on each flight. The Blue Sky Airlines credit card is an example of a:

- **a.** prepaid card.
- **b.** co-signed card.
- **c.** travel and entertainment card.
- **d.** reward card.

7. **Calculate** Tula has a $3,000 credit card balance that she revolves month to month. What is her minimum monthly payment if the credit card company calculates the payment based on 4% of the outstanding balance?

- **a.** $12.
- **b.** $120.
- **c.** $1,200.
- **d.** $1,440.

8. **Calculate** Tula has a $3,000 credit card balance. This month Tula made the minimum payment of $90. How much will she pay in interest this month if her credit card charges a 19% APR? Assume a 30-day billing period.

- **a.** $47.50.
- **b.** $72.50.
- **c.** $46.85.
- **d.** There is not enough information to answer this question.

9. Which of the following can happen if you co-sign a credit card and the cardholder fails to make a payment?

- **a.** You can be asked by the credit card company to make the payment.
- **b.** Your credit score can be negatively affected.
- **c.** Your ability to obtain a credit card in your own name can be damaged.
- **d.** All of the answer choices are correct.

10. What will likely happen if Terry Ann fails to make a payment on her secured credit card?

- **a.** The bank or credit union may cancel the card.
- **b.** The bank or credit union will deduct the payment directly from Terry Ann's account.
- **c.** The bank or credit union will deduct any fees directly from Terry Ann's account.
- **d.** All of the answer choices are correct.

Adventures in Personal Finance

Short Answer

1. If Sally was to only pay the minimum payment on her credit card loan, how would that payment amount change over time?
2. There are several ways in which credit card lenders can make money from cardholders. Name three cardholder behaviors that will help minimize their costs as borrowers.
3. Given all of the fees and the high cost of interest associated with credit cards, provide three reasons why individuals benefit from credit cards.
4. When would it make sense to make the minimum payment on a credit card?

Explore

1. **Calculate** Making only the minimum payment on a credit card can be costly because you will pay much more in interest over the life of the loan. For this exercise, assume the following facts:
   - Credit card balance is $1,000.
   - Credit card APR is 20%.
   - Minimum payment percentage is 2%.

   Visit an online credit card calculator (such as that provided by the **Navy Federal Credit Union**) to answer the following questions.

   a. What is the minimum payment this month on the credit card?

   b. How long will it take to pay off the credit card balance if only the minimum payment is made?

   c. How much interest will be paid on the loan if only the minimum payment is made?

   d. What is the best way to reduce the total cost of interest paid on a credit card loan?
2. Contact at least two local financial institutions in your community. Obtain information about their best credit card rates (APR, not just introductory APR). Then visit the **Bankrate** website and compare the APR offers from the local financial institutions with the offers from national credit card lenders. Which have the best offers?
3. Visit the **Federal Reserve**'s website on credit cards. What information was most helpful to you?
4. **Writing** **Presentation** A national shift toward smart-chip technology (sometimes called EMV) is revolutionizing the credit card industry. Investigate the primary reasons credit card companies are moving toward smart-chip technology and away from traditional credit cards with a magnetic strip. Prepare a brief report and present your findings in class.

Expanded Learning Activity

Writing The Credit Card Accountability, Responsibility, and Disclosure (CARD) Act of 2009 took full effect on February 22, 2010. The **Consumer Financial Protection Bureau (CFPB)** administers it. Research this legislation using resources available on the CFPB website. Write a fact sheet that highlights the major consumer benefits provided by the act. Additionally, find a credit card disclosure statement and determine how easy it would be for someone without a credit card to understand the terms and conditions offered by the credit card issuer.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

5.1 Explain the development and purpose of checks and checking accounts. A check is a written order to a bank to pay a third party. Using bank routing numbers and account numbers, the Federal Reserve System allows checks to be processed from anywhere in the country. Checking accounts are insured by the FDIC, and mismanagement of checking accounts can result in heavy fees and being prevented from opening future bank accounts. Shop around for the best checking account and be sure to actively monitor your checking account balance (keep it positive) to avoid hefty bank fees.

5.2 Identify the differences and similarities among debit cards, prepaid cards, electronic transfers, and checking accounts. The development and use of debit cards has changed the way consumers make purchases. Debit cards are linked to a checking account and can be used with a PIN (personal identification number) or by signing a receipt. Electronic payments can also be authorized from a checking account and transferred to a third party. Prepaid cards, or stored value cards, are not connected to a bank account and simply represent the amount of money loaded onto a card in advance. Money is generally loaded onto prepaid cards through a cash or electronic payment. Debit cards have FDIC insurance and some consumer fraud protection backing them; however, prepaid cards do not enjoy these benefits.

5.3 Determine the costs associated with borrowing money. Just about everyone will need to borrow money at some time in their lives. Borrowing money from mainstream financial institutions is the lowest-cost way to borrow money. Borrowing through alternative financial service providers is a high-cost and wealth-depleting borrowing decision. Using debt to increase future income is a wise decision. Debt that does not lead to increased future income results in financial strain. When shopping for a loan, the most important number is the APR. Generally, the shorter the term of the loan, the less interest you will pay, even if the monthly payment is greater than a similar loan with a longer term.

5.4 Know the purpose of a credit report. Credit reports are a tool that lenders, employers, insurers, landlords, and others use to make financial decisions about you. A credit report is a record of your past financial dealings with others; it is essentially your financial reputation. Understanding what goes into a credit report will help you understand what factors drive your creditworthiness. Many credit reports contain errors. Consumers should check their credit reports for free at least once per year to verify that there are not any errors on their credit reports. Errors can be corrected by contacting the specific credit reporting bureau.

5.5 Describe how credit scores are developed, calculated, and used. Credit reports are used to generate credit scores about individuals. A credit score is a number generally ranging from 300 to 850, with higher numbers representing higher-quality borrowers (low risk to the lender). Lenders routinely make lending decisions based on the client's credit score. A FICO® score is the most common credit score; however, each credit bureau has also developed their own scoring mechanisms. High credit scores should be developed and maintained so that you can always have access to low-cost borrowing options. High credit scores are developed through paying debts and bills on time, borrowing less than the total amount approved (particularly applies to credit cards), having a long positive credit history, limiting the number of new credit applications submitted, and utilizing a variety of different types of loans.

5.6 Explain the role of credit cards as a financial-management tool. Credit cards are powerful borrowing and spending tools. A credit card is a loan that can be used at the borrower's discretion and convenience and has flexible repayment options. Credit cards have greater consumer protection features than debit and prepaid cards. Credit cards are nearly essential when renting cars, reserving hotel rooms, or booking airline and travel tickets. Wise use of a credit card allows individuals to build strong credit reports and credit scores, enjoy significant consumer fraud protection, build reward points with a chosen service provider, and avoid having to pay interest on any credit card purchases by paying the bill off in full each month.

Continuing Case: Tarek's Financial Journey

Tarek has been thinking about getting a credit card, but he is skeptical that a credit card can be a useful spending tool for him. Instead, Tarek has always used a debit card. His reasoning is that using a debit card provides protection from overspending; after all, he can only spend what is in his account.

Instructions

a. Provide Tarek with at least three reasons he should consider adding a credit card as a spending tool rather than relying solely on a debit card.

b. Assuming that Tarek is now convinced that he needs a credit card, provide him with guidance on choosing between cards with different APRs. Specifically, when does choosing a credit card with a low APR really matter?

c. Tarek has heard that it is quite difficult to get a credit card. He had a friend whose credit score was 550 and was denied a credit card. This got Tarek scared, so he obtained a free credit report, used a free online resource to get his FICO credit score, and found out his credit score is 745. Based on this information, how difficult will it be for Tarek to obtain a credit card? What other advice do you have for Tarek if he decided to obtain a credit card?

d. Assume Tarek now has a credit card and he carries a $2,000 monthly balance. If the credit card company uses a 4% multiplier to determine the minimum monthly payment and the card has a 19% APR and 30-day billing cycle, what will be the minimum monthly payment? How much of the first payment will go toward paying interest?

Calculating the Cost of Life's Financial Journey

Belinda is in the process of choosing a credit card. She has narrowed her choice to two cards:

1. A credit card co-branded with a major airline. The card offers the following features:

- 1 mile earned for every $1 spent on eligible purchases.
- A $25 per bag fee will be waived for the first bag checked per flight and free priority seating.
- The card charges an annual $95 fee. The APR varies from 16.50% to 25.50% based on each borrower's credit score. Other fees, including balance transfer and late fees, apply. Card miles can be redeemed at the rate of $50 for 5,000 miles.

2. A credit card that offers a 1% cash-back rebate on all purchases made with the card during the year. The card offers the following features:

- The amount of cash earned never expires, and the cash earned may be redeemed or used to pay outstanding charges.
- The card has no annual fee. The APR varies from 11.75% to 23.75% based on each borrower's credit score. Other fees, including balance transfer and late fees, apply.

Belinda plans to spend approximately $45,000 per year on her credit card. Her plan is make purchases and then pay the balance in full each month. She is not particularly worried about the APR. She is primarily interested to know if the airline credit card is a good option if she plans to make two trips each year to see her family. (When making your calculations, assume that the cost of a flight is $500 for a roundtrip ticket. If she uses the cash-back credit card, assume that she will pay a $25 baggage fee for each leg of her trip.)

Instructions

Based on this information, which credit card should Belinda choose? What other factors should she consider when making her choice?

Planning for the Future

The Fair Credit Reporting Act (FCRA) gives each consumer living in the United States the right to obtain his or her credit report from one or more national credit reporting agencies. Under FCRA rules, you may order a free annual credit report from each of the three major credit bureaus each year. If you want more than one report from each bureau in a 12-month period, the credit reporting companies may charge a fee. Your credit report is a valuable tool you can use to manage your financial affairs. As such, it is important to make sure that the information used by the credit reporting agencies is correct. One way to do this is to get a copy of your report.

Instructions

Go to www.annualcreditreport.com or call a major credit bureau's toll-free number to get the reporting process started. You will be asked to provide personal information, such as your address and Social Security number. Although generally you should never disclose this type of information, in this case it is safe to share these details.

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER **6**

Loans and Housing Decisions

sturti/E+/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

6.1 Identify high-cost consumer loans and how to avoid them.

6.2 Explain the characteristics of a personal loan.

6.3 Discuss the sources of financial aid and loans available to students.

6.4 Develop a vehicle-acquisition strategy that uses an auto loan or lease.

6.5 Know the basics of renting a home or an apartment.

6.6 Describe the necessary considerations and benefits associated with purchasing and owning a home.

Nearly everyone celebrates life's milestones, such as going to college, buying a new car or truck, and purchasing a home. Right now, completing college is probably the milestone you're hoping to achieve next. Obtaining a degree is not only a fantastic way to increase your human capital, it signals to current and future employers that your skills and abilities should be valued in the marketplace.

Unfortunately, paying for college can be expensive. This chapter provides an overview of the primary way—other than using cash, debit cards, or credit cards—that people pay for college and other consumer needs: borrowing money. You'll learn ways to evaluate consumer and educational loans, avoid paying excess fees and interest rates, and identify the appropriate role of personal loans in your life. In this chapter, we'll talk about different types of debt, generally from the worst debt first and the most consumer-friendly debt last.

This chapter also provides details on other types of loans. As you continue moving forward on your lifetime financial journey, it's likely that buying a vehicle and a home will become important financial goals. This chapter was written to help you make these goals a reality. You'll learn about the advantages and disadvantages associated with renting, leasing, and buying cars, as well as the strategies to use when renting or buying a home.

Paying for College: The Facts

Not surprisingly, a primary factor that discourages people from pursuing a college education is the cost of tuition and other expenses. The **College Board** recently estimated that tuition at private colleges is close to $32,000 per year, and in-state tuition for public colleges and universities is nearly $10,000 per year. More alarming is the fact that these figures do not include housing or course fee expenses, which can add another $10,000 or more per year to the total annual cost.

Many students and families simply don't have the money available to pay for college. If students can work and get scholarships to pay for college, that is often a great strategy. If not, this is where college loans come into play. Let's test your current federal student loan knowledge. Complete the following questionnaire by selecting the best response for each question.

What Do You Know About College Loans?

1. Approximately how many Americans hold college student debt?

a. 10 million. **c.** 100 million.
b. 44 million. **d.** 220 million.

2. Who sets the interest rates on federal student loans?

a. Banks. **c.** The Office of the President.
b. The Federal Reserve. **d.** Congress.

3. Approximately how much federal student loan debt do those with a 4-year degree hold at graduation, on average?

a. None. **c.** $27,000.
b. $10,000. **d.** $54,000.

4. How many payments is the standard federal student loan repayment plan based on?

a. 60. **c.** 100.
b. 90. **d.** 120.

5. Which college loan type charges the highest interest rate for an undergraduate student?

a. Direct PLUS loan for parents. **c.** Direct subsidized loan for students.
b. Direct unsubsidized loan for students. **d.** This is a trick question because each loan listed charges the same rate.

Let's see how you did. Here are the correct answers: 1. b, 2. d, 3. c, 4. d, and 5. a.

If you answered the majority of these questions correctly, you know more than most people about federal student loan programs. If you were guessing at some of these questions, don't worry. This chapter was written to help fill in the gaps. Regardless of your current knowledge, the most important thing you can learn from this chapter is how to manage debt prudently so that borrowing money can actually help you to gain wealth over your lifetime financial journey.

High-Cost Consumer Loans

LO 6.1 Identify high-cost consumer loans and how to avoid them.

Along your lifetime financial journey, you'll quickly learn that life is full of surprises. Unfortunately, those unexpected bad financial events always seems to occur when we're least able to afford them. Of course, the best way to handle unforeseen circumstances is to have money set aside in an **emergency fund**. Financial planners often recommend that emergency funds be kept safe, secure, and accessible, like in a savings account. However, if you haven't been able to save much money yet, there are other ways you can access money quickly. In fact, many different types of lenders will be happy to step in and loan you money. Regrettably, some of these lenders will offer to help you in your moment of financial need so that they can profit at your expense. In this topic, we identify some of the worst loans available and how to avoid them.

Alternative Financial System Loans

When dealing with lenders, you have many choices. Lenders can be generally classified into two different categories, as shown in **Illustration 6.1.1**.

1. Members of the **mainstream financial system**, which include banks and credit unions. These institutions offer lower interest rates, are more heavily regulated by state and federal government agencies, offer what are considered traditional loan products, and rely heavily on each borrower's credit report and credit score when deciding whether to approve a loan (see **Helpful Hint**).
2. Members of the **alternative financial system**, such as check cashers, money order providers, pawn shops, payday lenders, auto title loan lenders, and rent-to-own retailers. These types of lenders typically don't rely on an individual's credit report when making a loan decision. Instead, these firms focus on making loans that are collateralized either with an asset or access to a borrower's bank account. In this way, if a borrower makes a late payment or fails to pay, the lender can seize the borrower's assets and enforce payment through other legal means.

HELPFUL HINT

When given a choice, most consumer advocates recommend using products and services provided by mainstream financial service providers.

ILLUSTRATION 6.1.1

Types of Mainstream and Alternative Lenders

Mainstream Lenders	Alternative Lenders
• Banks	• Check cashers
• Credit unions	• Payday lenders
• Auto manufacturer financing	• Title loans
• Credit card issuers	• Pawn shops
• Merchant credit cards	• Seller-financed used car loans

The world of alternative lending is quite large.

- According to FDIC data, approximately 34 million U.S. households (about 25% of the population) are **unbanked** or **underbanked**, meaning that they have no or only a limited relationship with a bank or credit union.
- People are unbanked for many reasons. Some people believe that banks are too expensive to deal with because of overdraft charges and other fees. Others are not allowed to have a bank account because they have abused their account privileges in the past by overdrawing their accounts and refusing to repay the funds and associated fees. Other unbanked individuals believe that banks do not offer the flexible financial services that they are seeking.
- To gain access to loans and other financial services, the unbanked and underbanked often use services provided by firms operating in the alternative financial service system.

Payday Loans

The most popular alternative loan is a **payday loan**, which is a short-term loan designed to be repaid within a few weeks when the borrower receives a paycheck. Here's how a typical payday loan transaction occurs. Consider Tisha who works full-time and goes to school. Her car just broke down, which is a real problem because she needs it to get to her job and classes. Her mechanic told her that it would cost $500 to repair it, which is more than she currently has in her savings account. Because Tisha doesn't have the cash or a credit card to pay for the repair, she panics and visits a payday lender, who agrees to lend Tisha $500.

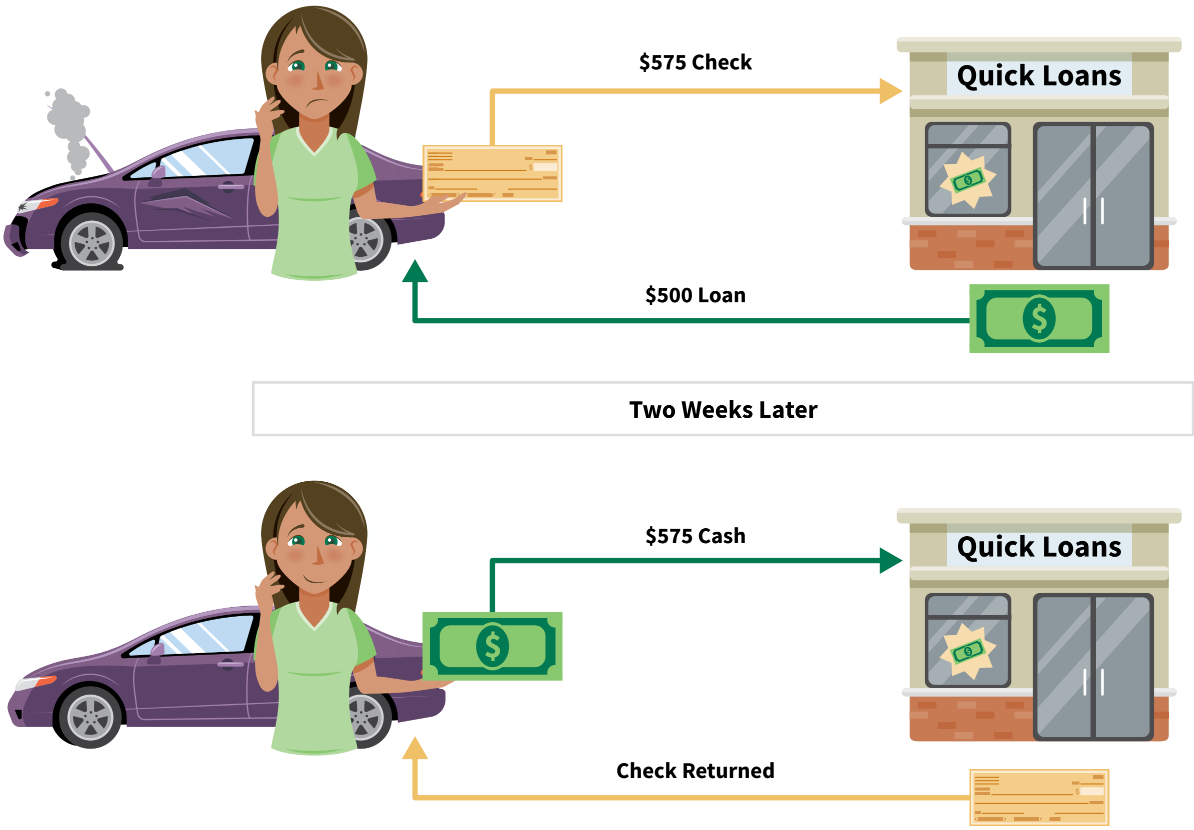
HELPFUL HINT

The APR of this payday loan is 391%! We discuss how to calculate the APR in the next section.

1. The payday lender charges a $75 fee for a 2-week loan (see **Helpful Hint**), but rather than demand the fee today, the payday lender simply adds it to the amount Tisha will owe later.
2. As collateral, Tisha writes a check in the amount of $575 and hands it to the payday lender employee.
3. When the 2 weeks are up, Tisha needs to return and "buy back" her check for $575 in cash.

The process is shown in **Illustration 6.1.2**.

ILLUSTRATION 6.1.2 **The Process of a Payday Loan**



If Tisha doesn't pay back the loan in 2 weeks, the lender will attempt to cash the check. If Tisha has insufficient funds in her account, she'll pay a bank fee and owe the payday lender even more money. Rather than have this happen, Tisha and many payday loan users often roll over one loan into another every few weeks by extending the terms of the original loan. They then get caught in the unfortunate trap of incurring a new fee each time a loan is rolled over.

How to Calculate the APR of a Loan

To calculate the approximate **annual percentage rate (APR)** on a payday or alternative loan that is based on fees rather than a stated interest rate, you'll need to perform a few simple math calculations. In Tisha's case, she obtained a 2-week (14 days) loan for $500

with a $75 loan fee. **Illustration 6.1.3** shows how to calculate the APR of this loan.

Take a breath. Yes, that is an APR of *391%!* This is the APR if no other fees are charged and assuming Tisha pays off the loan on time.

ILLUSTRATION 6.1.3

Steps to Calculate the APR of an Alternative Loan

1 Calculate the rate charged for the loan.

$$\frac{\$75}{\$500} = 0.15$$

That is 15% for 2 weeks!

2 Divide 365 by the loan term.

$$\frac{365}{14 \text{ days}} = 26.07$$

3 Multiply Step 1 by Step 2.

$$0.15 \times 26.07 = 3.91$$

4 Multiply Step 3 by 100 to show the number as a percentage.

$$3.91 \times 100 = \mathbf{391\%}$$

Pawn Shops and Title Loans

Pawn shops and title loans work the same way as payday lenders.

- Pawn shops and title loan companies base their loan on the value of **collateral**—something you give the lender that they can later sell if you don't repay the loan in a timely manner.
- Pawn shops typically provide a longer period to pay back a loan, but they give less of a loan compared to the value of the collateral.
- For example, if you pawn a $1,000 diamond ring, you may receive a 3-month $400 loan. At the end of the loan period, you could owe the pawn shop anywhere from $450 to $500 to get back the diamond ring.

Although these companies offer services valued by their customers, the fees and implicit interest rates for these types of loans and services are very high, ranging up to an APR of 400% (see **Helpful Hint**). The interest rate charged by alternative financial lenders is much higher than the credit-riskiness of their customers might indicate. However, many consumers believe that the convenience and transparency of the alternative financial system (i.e., a clearly stated fee for any service) is worth the higher costs when compared to the mainstream financial system.

Pros and Cons of Alternative Loans

Fewer Protections for the Consumer

The world of alternative lending is not highly regulated.

- Some states have stepped in and passed legislation to cap the amount of interest consumers pay.
- Other states have placed limits on fees and the number of times one person can obtain a loan in any given year.
- In general, borrowers need to know that there is less protection, compared with mainstream lenders, in case something goes wrong.

HELPFUL HINT

A high credit card APR is 26%, much less than the APR of most alternative loans (up to 400%).

The good news is that protections are in place for **military service members** and their dependents.

- Under current laws, the APR charged on a payday loan can't exceed 36%.
- In addition, lenders can't require collateral or access to a bank account for the loan, require mandatory arbitration, or use unreasonable legal means to obtain a loan payment.
- Service members should always check for other sources of loans before taking a payday or other alternative loan, including the **Army Emergency Relief**, **Navy and Marine Corps Relief Society**, **Air Force Aid Society**, and **Coast Guard Mutual Aid**.

Best Low-Cost Alternative Loan Options

Alternative financial service providers seek to provide a high level of social interaction and inclusion for their clients, making customers feel more welcome compared with mainstream institutions. In addition, alternative lenders are quick to point out that fees, such as overdraft charges on checking accounts, late fees on credit card payments, and overdraft expenses on debit and ATM cards, may be higher at a bank than what it costs to borrow a similar amount of money from a payday lender. In general, however, **the best approach is to rely on low-cost borrowing options from mainstream financial service providers if possible**. Some of

these low-cost borrowing options, many of which we'll discuss in later topics, are shown in **Illustration 6.1.4**.

ILLUSTRATION 6.1.4 **Borrowing Options and Alternatives**

Product	Good Credit Score Required	Additional Application Requirements	Example Finance Charge: $300 for 3 Months*
Parents or family	No	None.	Likely 0% APR, $0
Subsidized student loan	No	FAFSA form. No credit check required.	5% APR, deferred interest, $0**
Auto loan at bank	Yes	Must own the car and have equity in it. Complete loan application at bank.	6% APR, $4.52
Personal loan at bank	Yes	Complete loan application at bank.	10% APR, $7.56
Credit card	Yes	Complete a loan application.	12% APR, $9.09
Credit offered by service provider	Yes	Service providers often offer loans to customers to pay for services. The loan is generally made by a national lender partnering with the local business. Complete application at store.	29.99% APR, $23.06
Pawn shop	No	Something of significant value to give to the pawn shop as collateral. If the loan is repaid, the item can be reclaimed; if not, the item is sold.	200% to 400% APR; $176.39 (at 200% APR)
Title loan	No	Must own the car without any other loans against the car. No credit check required.	300% APR, $285.94
Payday loan	No	Must write a personal check for the loan amount plus a fee, usually $15 per $100 borrowed. In 2 weeks, must repay the loan or renew the loan with an additional fee. No credit check required.	390% APR, $393.92

*The finance charge assumes that the entire $300 balance is carried for 3 months then paid in full. If monthly payments are made, the finance charges will be less.

**A subsidized loan means the federal government pays interest on the loan while the student is enrolled in school.

Let's say John needs $300 in an emergency:

- If he borrows $300 for 3 months from an alternative lender, he'll end up paying more than $175 in interest (200% APR).
- If he borrows $300 for 3 months from a bank or credit union, he will likely pay between $5 and $10 in interest (6% to 12% APR).

John will save a considerable amount of money using a mainstream financial service provider. But to do that, he needs to establish and maintain an organized and flexible financial-management system. This starts by saving a portion of every dollar earned, building an emergency fund, and borrowing money and paying it back responsibly. If John can start doing this today, he can establish credit and begin to build a credit score so that banks and credit unions will want to lend money to him.

Concepts in Action

Jonah is in a pinch. He owns an older car (worth about $2,500) that has broken down and now needs a $500 repair, plus he already owes $400 to the mechanic for previous work done on the transmission. He needs the car to get to work and school, but he doesn't have the cash to get the repair done. Jonah considered going to a bank for a loan, but he didn't think he could qualify for one (although he does have a checking account at the bank). He just heard an advertisement on the radio that he can get a quick loan from a title loan company. This alternative intrigued Jonah because the advertisement said that the lender would not check his credit report. What do you suggest Jonah do?

Solution

Jonah's first course of action should be to go to his bank, where he has an existing relationship, and see if he can qualify for a personal loan. The bank may require that he use the car as collateral, or the loan officer at the bank may offer Jonah a personal loan with payments deducted directly from his bank account. Given the age of the car, this is the most likely scenario. Alternatively, the bank may be willing to extend Jonah a loan for a newer used car that is more reliable (before doing this, however, the bank may require that Jonah first pay back the mechanic). A newer car and loan would help his transportation needs and establish a credit history and report for Jonah.

If the bank isn't willing to extend a loan, Jonah should next check with his mechanic to see if she might do the work based on another personal loan. Jonah could also shop among different repair shops. One shop may offer a store credit card or an affordable line of credit. A title loan should be the last alternative for Jonah.

As this scenario highlights, it is important to have a savings plan in place and to start an emergency fund. The purpose of an emergency fund is to help offset unforeseen expenses and to show mainstream lenders that you're a good credit risk. In this case, even if Jonah didn't have all of the money saved in an emergency fund, a lending officer at a bank would be more inclined to lend money if Jonah could put up a portion of the repair cost.

How to Avoid Expensive Loans

Emergency Funds

Many Americans fail to set money aside for emergencies. This creates tremendous vulnerabilities for themselves and their families. Ask yourself this: Would you be able to come up with the money if faced with a $2,000 unexpected expense in the next month?

When asked this question in a survey, approximately half of all American consumers said that they could probably not or certainly not be able to come up with $2,000 in an emergency. Although $2,000 is a significant amount of money, it does not require too much imagination to identify possible things that could go wrong to create a bill for this amount.

How long would it take to save $2,000 in an emergency fund?

- The answer is easy to calculate because you should assume that you will earn a low yield on any emergency savings.
- If you could save $25 per month (that is less than $1 per day), it would take you nearly 7 years to accumulate $2,000.
- If you could find and save about $1.50 per day, it would take you about 3½ years to reach your goal (see **Helpful Hint**).

HELPFUL HINT

For the price of a daily soda and candy bar, you could accumulate a nice emergency fund in just a few years.

Other Sources of Funds

U.S. households indicated that when faced with a $2,000 financial emergency, they would try to come up with the money in the following ways (from the same survey as above, ranked per number of responses, from most to least):

1. Withdraw the funds from their savings, investments, or other financial accounts.
2. Borrow the money from family and friends.
3. Obtain a loan from a bank, credit union, or other mainstream financial institution.
4. Work more hours to increase pay.
5. Sell something of value.
6. Use alternative financial services (payday lenders and pawn shops).

Although only 11% chose the last option, it does represent a significant number of households in the United States. But remember that the use of alternative financial services limits a household's ability to accumulate wealth over time because of the high cost of borrowing.

HELPFUL HINT

Taking an alternative loan is like taking a financial detour that leads to a dead end. Households that go down the alternative borrowing path seldom are able to make it back to the path of their mainstream financial journey.

There's just no way to save money if you end up paying 400% on an annual basis for loans. Simply put, the more you pay in fees and interest, the less money you'll have available to save (see **Helpful Hint**).

One other common strategy that individuals employ when faced with financial emergencies is to skip certain payments one month to make other payments during that time. This is a last-resort option. Using this strategy will likely lead to a lower credit score and a tarnished credit report, both of which will result in higher borrowing costs. In rare situations, this strategy may work over a short time period. However, if there is no prospect of getting caught back up on all the bills, such a strategy should be avoided and longer-term solutions, such as eliminating expenses or increasing income, need to be pursued.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following provides the least expensive alternative to meet an unforeseen financial expense?

- **a.** Money in a savings account.
- **b.** A credit card.
- **c.** A short-term loan until the next pay day.
- **d.** A short-term car loan.

2. Which of the following lenders will likely provide the lowest interest rate to qualified borrowers?

- **a.** Banks and credit unions.
- **b.** Credit card company.
- **c.** Title loan lender.
- **d.** Retail/store credit card.

3. Some consumers may not understand the high cost of borrowing in the alternative financial services market and instead focus on the ____________ to justify using alternative financial services.

- **a.** convenience
- **b.** cost
- **c.** fee structure
- **d.** long-term expenditure

4. **Calculate** Susan borrowed money from her credit union using her car as collateral. The monthly interest rate on the loan is 0.2%. There were no other fees associated with the loan. What is the APR of Susan's car loan? Assume 12 equal months.

- **a.** 0.2% APR.
- **b.** 2.0% APR.
- **c.** 2.4% APR.
- **d.** 24.0% APR.

5. **Calculate** Timia needs some cash in a hurry. She owns her car outright and is considering a title loan. The lender has told Timia that she could borrow $1,000 for 1 month and the fee would be $100. What is the APR on Timia's loan? Assume 12 equal months.

- **a.** 10% APR.
- **b.** 100% APR.
- **c.** 120% APR.
- **d.** 200% APR.

6. Aman is attending school and had a financial emergency. He contacted his school's financial aid office and asked about a subsidized student loan. Aman's school facilitates these loans and determined that Aman qualifies for a $500 loan. Aman is able to repay the loan over the next 12 months while he is still in school. How much interest will Aman pay on this loan?

- **a.** $0 because interest on subsidized loans does not accrue until Aman stops attending school.
- **b.** $25 because the interest rate is 5%.
- **c.** $12.50 because Aman has been making payments on the loan.
- **d.** None of the answer choices are correct.

7. **Calculate** Izzy just received a credit card offer in the mail. The credit card has an APR of 18%. What is the monthly interest rate that will apply to any unpaid balances on this credit card? Assume 12 equal months.

- **a.** 18.0%.
- **b.** 1.0%.
- **c.** 1.5%.
- **d.** 1.8%.

8. All of the following statements are true, *except*:

- **a.** reliance on credit reports and credit scores often differentiates mainstream and alternative financial service providers.
- **b.** there is a relatively small difference in the total finance charge between mainstream and alternative financial service providers.
- **c.** individuals without credit reports should always first apply to mainstream lenders.
- **d.** individuals with emergency funds are less likely to use high-cost loans.

9. In a recent survey, U.S. households were asked how they would come up with $2,000 in an emergency. What percentage of those who said they could get $2,000 in an emergency said they would use alternative financial services?

- **a.** 5%.
- **b.** 7%.
- **c.** 11%.
- **d.** 20%.

10. Some individuals facing financial emergencies will attempt to skip certain payments to make other payments. This strategy is generally not helpful because:

- **a.** the individual's credit report and credit score will be tarnished.
- **b.** if income does not increase or expenses do not decrease, then nothing will change in the long run.
- **c.** this will likely lead to higher borrowing costs in the future.
- **d.** All of the answer choices are correct.

Adventures in Personal Finance

Short Answer

1. List some reasons why individuals may choose to use alternative financial service lenders.

2. If you were faced with a financial emergency in which you were going to need $2,000 in the next month, where would you get the money from?

Explore

1. **Calculate** **Presentation** Contact several check cashers, payday lenders, and title loan lenders in your community and find out what they charge for a loan and the length of the loan period. Then calculate the APRs using the four-step process shown in Illustration 6.1.3. Share with others in class the range of interest rates you found in the community.

2. Contact a local bank or credit union in your community and ask if it is possible to get a loan (any type, such as auto loan, credit card, or other) if you do not have a credit report or credit history. Also ask what types of loan products are available for those just starting on their financial journey. What would be the interest rate on such a loan?

3. Conduct an Internet search to determine if your state has limits on the interest rate that certain types of lenders can charge. Discuss any limits your state imposes on lenders.

Expanded Learning Activity

Writing Recently, pawn shops have been replaced by online marketplaces that bring together buyers and sellers from across the globe. Some large online classified providers have emerged to foster greater opportunity for sellers and buyers to connect. Research this type of marketplace system and prepare a one-page report detailing your findings, including its advantages and disadvantages relative to pawn shops or flea markets.

Personal Loans

LO 6.2 Explain the characteristics of a personal loan.

By now, you should have a very good idea of the importance of establishing a bank account and maintaining a strong credit report. However, even if you do both of these things, you may find at one point that you simply don't have the financial resources available to pay all your expenses. In this topic, we discuss how a personal loan might be just what's needed to bridge this gap and keep you moving forward on your lifetime financial journey.

Importance of Personal Loans

A **personal loan** is typically a small-dollar debt that can be used to pay bills or make purchases. For example, let's say that your friend Justin makes $22,500 per year. Although he generally makes enough to cover his living expenses from his paychecks that he receives every 2 weeks, this month he needs an extra $350 to pay all of his bills. What advice would you give Justin if you knew that he has a steady job but just not enough cash coming in this month? The good news is that Justin has several options (see **Illustration 6.2.1**).

ILLUSTRATION 6.2.1

Short-Term Loan Options

Cash Advances

Some people might suggest that Justin use his credit card to pay the bills or take a **cash advance** on his credit card from an ATM. Although it's true that he will pay a fee for the cash advance

and pay interest on the loan, accessing cash this way is far better than taking a payday or car title loan. After all, the typical payday loan in the United States carries an APR of nearly 400%! But if Justin doesn't have a credit card, he'll need to pursue other borrowing options (see **Helpful Hint**).

> **HELPFUL HINT**
>
> **According to the Federal Reserve Survey of Consumer Finances, about 25% of adults living in the United States do *not* have a credit card, especially young adults who are just starting their careers.**

Borrowing Options

Without a credit card, Justin has a few other borrowing options. He can:

- Ask a friend or family member for a loan (this option may not be available).
- Request an advance on his paycheck (many employers will absolutely reject this option).
- Contact the companies he owes money to, explain his situation, and ask for a modification to his billing plans (this could have a negative impact on his credit score, which would hurt his ability to get a credit card or other lower-cost financing in the future).

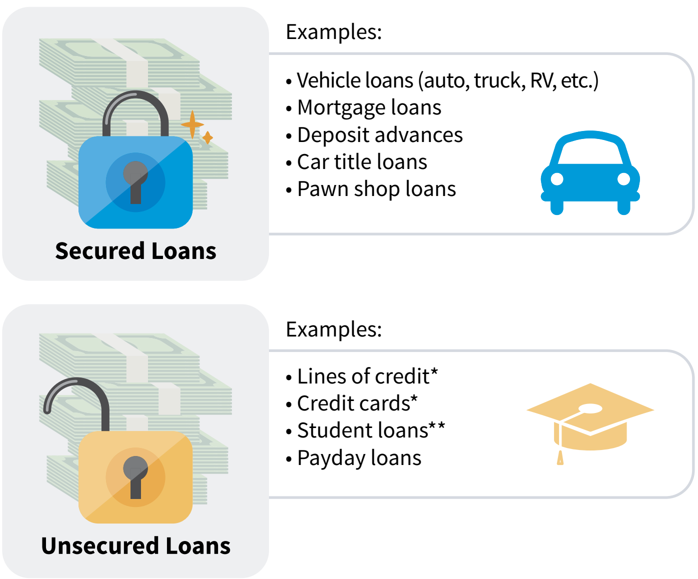
This example highlights a common situation facing many Americans today. People like Justin often feel trapped into using either a payday or title loan borrowing option because they simply do not know where to turn for a short-term small-dollar loan. However, there are many personal loan options for those who need to occasionally borrow money.

Types of Personal Loans

Key Lending Terms

To understand personal loans from a bank's or credit union's perspective, it's important to first review a few key lending terms. As shown in **Illustration 6.2.2**, personal loans can be secured or unsecured.

- A **secured loan** is one that is backed by collateral. Think of collateral as property (such as a car or valuable item) that can be seized by the lending institution if the borrower fails to repay the loan.
- **Unsecured loans** are sometimes called **signature loans** because there is no collateral involved in the lending process. As a result, an unsecured loan is considered to be riskier than a secured loan and therefore carries a higher interest rate.



*Lines of credit and credit cards can be secured loans when other assets (e.g., savings or checking accounts, certificates of deposits) are required as collateral.

**Tax refunds and other federal government payments may be seized to offset federal student loans that have been sent to collection.

ILLUSTRATION 6.2.2

Types of Secured and Unsecured Loans

Installment Credit

Let's say that Ana wants a loan to buy some furniture. If she obtains a secured loan from a bank using the furniture as collateral, the bank can repossess the furniture if she fails to pay back the loan. Ana's furniture loan is an example of a **collateralized installment personal loan**.

HELPFUL HINT

When borrowing money for the purchase of an asset, such as furniture or an automobile, a best practice is to make sure that the loan repayment period is shorter than the expected useful life of the asset.

- With an **installment loan**, the borrower receives the full amount of the loan upfront in a single lump sum.
- Usually, the interest rate is fixed, as is the payback period (this is in contrast to credit cards, where the minimum payment from month to month changes based on the unpaid balance owed on the credit card).
- Loan repayment periods for installment loans generally last from 1 to 5 years (see **Helpful Hint**).

Line of Credit

A personal installment loan makes sense for someone like Ana who needs to purchase something that costs more than what she has in the bank. Someone like Justin, however, probably doesn't need an installment loan. His problem is one of cash flow. Justin needs a short-term loan to cover a few bills. A solution for Justin is a **personal line of credit**. Usually, lines of credit are unsecured, which means that if Justin fails to pay back the loan, the lender can't repossess any of Justin's property. Here's how a line of credit works:

1. The bank tells the customer (borrower) how much may be borrowed in total.
2. The borrower is then given a debit card or a checkbook.
3. The borrower can then access the line of credit as needed.
4. Interest is only paid on the money borrowed.

HELPFUL HINT

A credit card may be a safer borrowing option than a line of credit because of federal regulations protecting consumers from credit card fraud.

Obviously, the more money Justin borrows, the more he'll need to pay back on a monthly basis. In effect, line-of-credit personal loans look similar to credit cards in allowing someone to maintain a revolving balance month to month (see **Helpful Hint**).

Deposit Advance

It's now time for a reality check. Obtaining a personal loan or line of credit from a lending institution is relatively difficult and based on having a high credit score. Fortunately for someone like Justin, lending institutions are increasingly offering deposit-advance services for those who have less-than-stellar credit scores. A **deposit advance** is a short-term loan that is automatically repaid when the next qualifying electronic deposit is made (such as the next paycheck). These loans compete directly with payday loan services but at a much lower cost. Here's how a deposit advance works:

HELPFUL HINT

Although the APR on a deposit-advance loan is approximately 100%, it is much lower than the APR on payday loans (up to 400%).

- To qualify for a deposit-advance loan, a borrower must have a checking account and a history of having paychecks, federal benefits, or other deposits made electronically.
- When a loan is needed, the borrower pays the bank approximately $10 for every $100 borrowed.
- The borrower then has 35 days to pay back the loan.
- If the loan is unpaid at that time, the lending institution will remove any money from the account and likely charge an **overdraft fee**—a fee for insufficient funds in the account (see **Helpful Hint**).

Personal loans can be a lifesaver for many consumers. Before taking a personal loan, however, realize that personal loans have many restrictions and can be expensive. It's therefore important to carefully compare personal loan options to know the costs and payment schedules, the APRs associated with the loans, what penalties may be applied, and what happens if the loans are not repaid.

Peer-to-Peer Lending

The marketplace has stepped in to help people make loans to each other rather than through a company. **Peer-to-peer (P2P) lending** allows a borrower and lender to come together via the Internet. Popular P2P lending platforms include **LendingClub**, **Peerform**, and **Prosper** (see **Helpful Hint**).

HELPFUL HINT

Even though the lending sites do charge a loan origination fee, P2P lending offers a way for many consumers to obtain a lower-cost loan.

- These services allow people 18 years of age or older to enter their personal information into a database.
- Each of the service providers creates a "lending score" that is driven by a borrower's credit report.
- Those who have at least a 650 credit score can then ask lenders (known as investors) for a loan.
- Loans can range from $1,000 to $40,000.
- Interest rates vary but generally do not exceed 32% APR.

Comparing Personal Loans

Assuming that you have a checking account, you can use the information in **Illustration 6.2.3** to evaluate personal loan alternatives.

- Note that the dollar and interest rates shown are based on national averages.
- Keep in mind that some states restrict how much may be borrowed and charged.
- It's worth emphasizing that to qualify for a low-cost personal loan, you'll need to have a good credit history and score, or find a co-signer with a good credit score.

ILLUSTRATION 6.2.3 **Personal Loan Comparison Chart**

	Payday Loan	Installment Loan	Line of Credit	Deposit Advance
Loan type	Lump sum	Lump sum	Borrow as needed	Lump sum
Average fee	$15 per $100 borrowed	$0	$25–$50 per year	$10 per $100 borrowed
Payment options	Single payment	Fixed monthly payment	Variable based on amount borrowed	Single payment
Loan duration	7–14 days, based on pay cycle	1–5 years	Unlimited but requires monthly minimum payment	35 days
APR	300% +	Fixed; no higher than 33%	Variable; no higher than 33%	200% +
Borrowing limits	$0–$5,000 (based on income)	$500–$10,000 (based on income and credit score)	$500–$100,000 (based on income and credit score)	$0–$5,000 (based on income and credit score)
Appropriate for	Those with low credit scores, should be avoided	Those who want a fixed monthly payment	Those who need occasional loans to pay bills	Those looking for an alternative to a payday loan

Concepts in Action

Your friend Janeen would like to borrow \$500 on the first of the next month and will repay the money the following month. She is comparing the following three loans:

- Lender 1 charges \$15 per \$100 borrowed. The loan is payable in full in 30 days.
- Lender 2 charges an APR of 33% with the loan payable in full at the end of the year.
- Lender 3 charges \$10 per \$100 borrowed. The loan is payable in full in 14 days.

What advice do you have for Janeen?

Solution

Use a four-step process when estimating APR for payday loans (Lenders 1 and 3).

Step 1: Calculate the rate charged for the loan: $\$15 \div \$100 = 0.15$ (Loan 1) and $\$10 \div \$100 = 0.10$ (Loan 3).

Step 2: Calculate the daily rate by dividing the rate from Step 1 by the days in the loan term: $0.15 \div 30 = 0.0050$ (Loan 1) and $0.10 \div 14 = 0.0071$ (Loan 3).

Step 3: Multiply Step 2 by 365 to calculate the annual rate: $0.0050 \times 365 = 1.8250$ (Loan 1) and $0.0071 \times 365 = 2.6071$ (Loan 3).

Step 4: Multiply Step 3 by 100 to calculate the APR: $1.825 \times 100 = 182.50\%$ (Loan 1) and $2.607 \times 100 = 260.70\%$ (Loan 3).

Now that all three loans are comparable in terms of APR, you can see that Lender 2 offers the best loan (a fixed 33% APR). Lenders 1 and 3 may look less expensive because they charge a fee per loan, but in reality, these loans are six to nine times more expensive than Lender 2's option.

You should also explain to Janeen that the best way to qualify for the lower-cost loan is by having a solid credit score. If she has a good credit score, she could visit her bank or credit union and apply immediately.

End-of-Topic Assessment

Multiple-Choice Questions

1. One segment of the U.S. population that is less likely to have a credit card is:
   - **a.** retirees.
   - **b.** young adults just starting their careers.
   - **c.** women.
   - **d.** minorities.
2. Collateral is:
   - **a.** required for all personal loans.
   - **b.** only required if a credit score is not high enough.
   - **c.** used with unsecured loans.
   - **d.** property that can be seized by the lender if a loan is unpaid.
3. The interest rate on secured loans is generally __________ the interest rate charged on unsecured loans.
   - **a.** lower than
   - **b.** higher than
   - **c.** about the same as
   - **d.** not charged compared with
4. With an installment loan, the borrower:
   - **a.** receives the full amount of money upfront and then makes regular payments to repay the loan and interest.
   - **b.** is told how much she or he can potentially borrow, and then using a debit card or checkbook, the borrower can access the money and repay the loan and interest through flexible repayments.
   - **c.** can receive a short-term loan from a bank or credit union by pledging an upcoming automatic account deposit, such as a paycheck, as repayment of the loan and fees.
   - **d.** can borrow up to a maximum of \$100,000.

5. An advantage of a line of credit from a bank over an installment loan is that:

- **a.** if the borrowed funds are repaid, then the credit line is still available for future use without having to apply for another loan.
- **b.** it is generally an unsecured loan.
- **c.** the interest rate is competitive with other low-cost forms of credit.
- **d.** All of the answer choices are correct.

6. Peer-to-peer lending options:

- **a.** facilitate loans between groups of individual investors and individual borrowers.
- **b.** provide competitive loan terms to borrowers that do not have access to conventional loans.
- **c.** are accessed through the Internet and require a borrower to have a credit report.
- **d.** All of the answer choices are correct.

7. **Calculate** What is the APR for a loan that charges a $12 fee to borrow $100 for a loan period of 10 days?

- **a.** 120% APR.
- **b.** 304% APR.
- **c.** 312% APR.
- **d.** 438% APR.

8. **Calculate** What is the APR for a loan that charges 2.4% every 30-day payment period?

- **a.** 29.2% APR.
- **b.** 28.0% APR.
- **c.** 24.3% APR.
- **d.** 19.9% APR.

9. **Calculate** What is the APR for a loan that charges $25 to borrow $300 for 14 days?

- **a.** 83.3% APR.
- **b.** 100.0% APR.
- **c.** 166.7% APR.
- **d.** 217.3% APR.

10. **Calculate** Which of the following loans has the lowest APR?

- **a.** A line of credit with a 29.9% APR.
- **b.** A payday loan of $220 for a fee of $22 due in 15 days.
- **c.** A deposit advance of $220 for a fee of $11 due in 35 days.
- **d.** An installment loan that charges an interest rate of 2.9% per month.

Adventures in Personal Finance

Short Answer

1. There are several steps involved in obtaining a personal loan from a lending institution such as a bank or credit union. Place the following actions in the correct order for people just starting their financial journey (list from first to last):

______ **a.** Build a good credit score.
______ **b.** Open a checking account.
______ **c.** Determine the amount of loan needed.
______ **d.** Estimate the loan APR.
______ **e.** Deposit funds in account.
______ **f.** Apply for a personal loan.

2. List the characteristics of installment loans, and give three examples of installment loans.

3. Provide three examples of unsecured loans. Which type of loan generally has a higher interest rate, secured or unsecured loans? Why?

4. Peer-to-peer lending sites offer borrowers an opportunity to get loans with competitive loan terms. These platforms also give individuals an effective way to invest and earn higher returns than could be earned on savings accounts and CDs. What are the risks associated with investing in a peer-to-peer lending platform? What are the potential rewards?

5. Getting a paycheck advance from an employer or borrowing money from friends and family will likely result in the lowest amount of interest charged, but what other costs may be incurred because of the loan?

Explore

1. Visit three peer-to-peer lending websites. Based on the information provided, compare each site's lending options by using the following format.

	Site 1	Site 2	Site 3
Minimum loan amount			
Maximum loan amount			
Minimum credit score			
Loan duration			
Average interest rate			
Origination fee			
Other fees			

2. **Writing** Research your city and state lending laws. Are there interest rate caps that all lenders are subject to in your state or are there no caps on interest rates charged on loans? Summarize your findings in three to four paragraphs, including your thoughts on whether this is a good or bad policy for your city or state.

3. Do a search in your community to find four to six lenders that make personal loans. Make two columns on a page. List all of the banks and credit unions on one side of the page, and on the other side list all of the other lenders. Call a few of the lenders and ask them what their typical APR is for a 1-year personal installment loan or similar product. Also ask about the application process. What did you find out? What are the differences you observed between the two groups?

Expanded Learning Activity

Presentation Contact at least two banks or credit unions in your community. Find out whether they offer deposit-advance loans and personal lines of credit. What are the terms of the loans? Is there a minimum credit score required to qualify for one of these loans, or is any credit score required? Share the results of your research with others in class.

Financial Aid and Student Loans

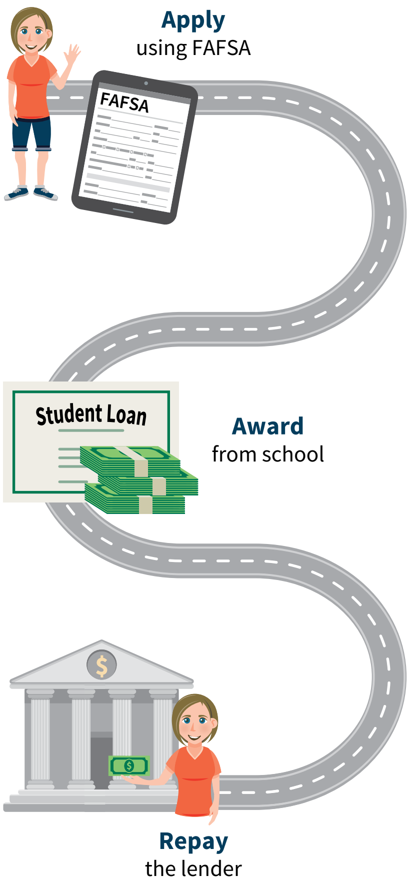
LO 6.3 Discuss the sources of financial aid and loans available to students.

A key step in achieving your financial goals involves obtaining the knowledge, skills, and education necessary for you to be successful in your chosen career path. In other words, you need to make wise human capital investments in yourself, such as obtaining a college degree. However, many people looking to invest in their future aren't able to pay the necessary tuition costs or training program fees using their current income and savings.

Luckily, several programs have been set up to provide financial assistance to individuals seeking to pay for their education and training. In addition to grants and scholarships, students attending eligible institutions may qualify for financial assistance for their higher education expenses from the federal government. In this topic, we discuss some of these options.

ILLUSTRATION 6.3.1

Financial Aid Process



The Process of Obtaining Federal Financial Aid

The process of receiving federal financial aid follows the three simple steps shown in **Illustration 6.3.1**:

1. Application.
2. Award.
3. Repayment (if a student loan is used).

Application

To determine what types of financial aid that you may receive, you must first submit a **Free Application for Federal Student Aid (FAFSA)** form (see **Helpful Hint**). (Some private colleges and universities use the **CSS/Financial Aid Profile®** application instead of or in addition to the FAFSA form.) You can prepare and submit your FAFSA form online, or you can complete a paper version and mail the document to the **U.S. Department of Education**.

To complete the FAFSA form, you will generally need to supply the following:

- Information from your tax return and your parents' tax return, depending on your situation.
- Your assets, liabilities, and net worth, as well as your parents' balance sheet information, personal and family demographics, and other information used to determine your eligibility for special financial aid programs.
- A list of the schools that you are thinking about attending so that your application can be forwarded to them. Each school will then issue a financial aid award letter if you are accepted.

Many other financial aid organizations also use the FAFSA form when making financial aid decisions. Thus, when you complete and submit your FAFSA form to the U.S. Department of Education, you're also completing a necessary step in the application process for other financial aid packages available through your school, state, or private organizations.

HELPFUL HINT

One of the best places to learn about federal financial aid and the FAFSA application is the Federal Student Aid website.

Award

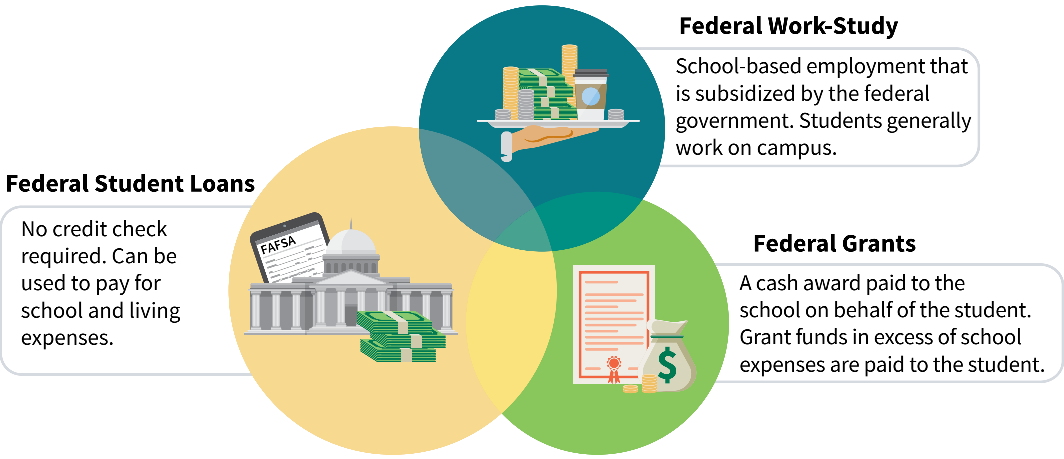
After you've submitted your FAFSA form, you'll be notified of your financial aid award package by each of the schools where you have been accepted.

- Each school will generally offer you a different financial aid package because the costs associated with attending each school varies.
- In addition, each school may have different resources that it can use to enhance financial aid awards to prospective students.

- **Illustration 6.3.2** shows the three main types of financial aid generally awarded. Note that the majority of financial aid awards are for student loans.

ILLUSTRATION 6.3.2

Types of Federal Student Aid



Students receiving federal financial aid awards may be awarded all three types of financial aid, or they may only receive one form of financial aid, such as access to federal student loans. Awards are based on the financial status of the student and his or her family. Keep in mind that federal work-study and grants tend to be awarded to financially needy families because they do not need to be repaid. Federal student loans, however, are another matter and require more attention and planning.

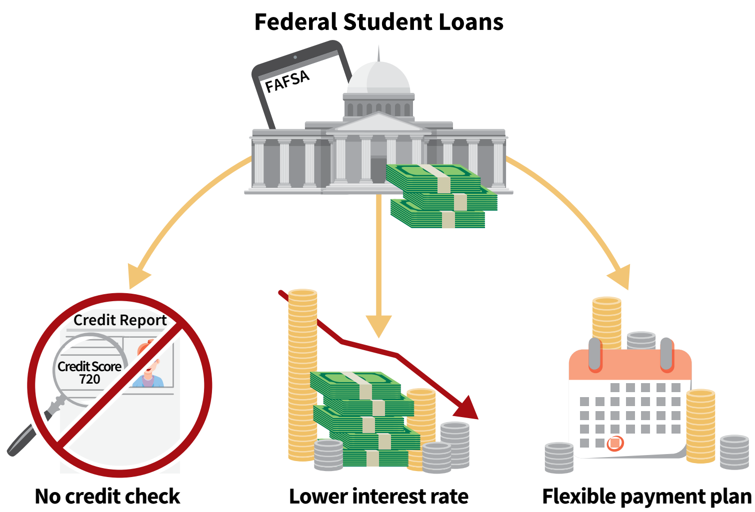
Federal Student Loans

Borrowing money for education directly from the federal government, rather than from private lenders, has several benefits (see **Helpful Hint**). These advantages are shown in **Illustration 6.3.3**.

ILLUSTRATION 6.3.3

Benefits Associated with Federal Student Loans

> **HELPFUL HINT**
>
> **Private student loan providers should be considered only after federal student loans have been exhausted.**



For financially needy students, the federal government will pay the interest on a loan while you're in school. In addition, federal student loans can be forgiven in some situations (which we will discuss in detail later).

Types of Federal Student Loans

Federal direct loans are the primary form of student financial aid. There are four types of federal direct loans:

1. **Direct subsidized loans** are federal student loans made to undergraduate students who demonstrate a financial need. If the student is enrolled in school for more than half-time,

interest on these loans is paid by the federal government, making these loans the best value if you have to borrow.

2. **Direct unsubsidized loans** are made to undergraduate, graduate, and professional students. Interest on these loans is added to the loan balance until payments begin—which is usually 6 months after graduation—and interest continues to be charged as payments are made (standard loan). The annual amount a student can borrow under both the direct subsidized and direct unsubsidized loans is capped. Students don't need to show a financial need to receive these loans.
3. **Direct PLUS loans** are available to graduate and professional students. Direct PLUS loans are also available to parents of undergraduate students to help pay for education expenses more than the capped amounts available through the other federal student loan programs. Interest on the loan is added to the loan balance, or students can pay the interest only until they're no longer attending school and repayment begins. Students don't need to show financial need to receive these loans.
4. **Direct consolidation loans** allow students to consolidate all of their federal student loans into one easy-to-manage loan.

Repayment of Federal Student Loans

Repayment of federal student loans typically must begin within 6 months of completing school or when students are at half-time status or less. The 6-month period is referred to as the **grace period**.

- There are several different repayment plans that can be designed to fit your needs.
- The best way to minimize the interest expense on a student loan is to repay it as quickly as possible.
- One benefit associated with all types of student loans—including federal student loans—is that the interest you pay may be tax-deductible (see **Helpful Hint**).

HELPFUL HINT

The Federal Student Aid website explains the variety of different options available to you as you work to repay your federal student loans.

Financial Aid in Practice

Comparing Student Loans

As was discussed above, the initial amount of financial aid awarded by a college or university is based on each institution's unique estimate of expenses in relation to the FAFSA application. Nearly all students, and their families, end up paying for tuition, room and board, and other expenses with a combination of current cash flow and student loans. Another alternative is to borrow money from a lender, such as a bank or credit union. The level of interest will be based on the credit score of the borrower. **Illustration 6.3.4** compares these loan options.

ILLUSTRATION 6.3.4 **Student Loans Compared**

	Eligibility	Interest Rate	Start of Interest	Start of Payments
Federal subsidized loan	Undergraduate student with need	4.45%	6 months after graduation as long as enrolled half-time	6 months after graduation or student drops to less than half-time
Federal unsubsidized loan	Any undergraduate, graduate, or professional student	4.45% for undergraduates; 6% for graduate/ professional students	Immediately	6 months after graduation or student drops to less than half-time
PLUS loan	Graduate and professional students and parents of undergraduate students	7%	Immediately	Immediately for parents 6 months after graduation or student drops to less than half-time
Private loan	Any student or parent	Varies, but typically higher than federal or PLUS loans	Immediately	Immediately

Repaying Student Loans

Obtaining a loan to help pay for college costs is one thing. Paying back the loan presents an entirely different set of challenges. There are eight possible loan repayment plans for those with a federal student loan (note that Congress and the Department of Education have indicated that some of these options may be amended in the future). **Illustration 6.3.5** summarizes the important elements associated with each of these repayment alternatives.

ILLUSTRATION 6.3.5 **Overview of Federal Student Repayment Options**

Repayment Plan	Eligible Loans	Monthly Payment	Eligibility
Standard Plan	All loans, including consolidation loans	• Up to 10 years (30 years for consolidated loans)	All student borrowers
Graduated Repayment Plan	All loans, including consolidation loans	• Payments start lower but increase over time • Up to 10 years (30 years for consolidated loans) ◆ Payments cannot be less than the periodic interest charge and cannot be greater than three times the standard plan payment	All student borrowers
Extended Repayment Plan	All loans, including consolidation loans	• Up to 25 years	Must have more than $30,000 in direct loans
Revised Pay as You Earn (REPAYE) Plan	• Subsidized and unsubsidized loans • Direct PLUS loans to students • Direct consolidated loans that do not include PLUS loans	• Payments limited to 10% of discretionary income • Payments recalculated each year based on income and family size • Total family income used to determine payment • Any debt remaining after 20 or 25 years will be forgiven	All student borrowers
Pay as You Earn (PAYE) Plan	• Subsidized and unsubsidized loans • Direct PLUS loans to students • Direct consolidated loans that do not include PLUS loans	• Payments limited to 10% of discretionary income • Payments recalculated each year based on income and family size • Family income considered only if taxes are filed jointly • Any debt remaining after 20 years will be forgiven	All student borrowers whose monthly payment using the PAYE plan would be less than the 10-year standard plan
Income-Based Repayment (IBR) Plan	• Subsidized and unsubsidized loans • Direct PLUS loans to students • Direct consolidated loans that do not include PLUS loans	• Payments will be 10% to 15% of discretionary income • Payments recalculated each year based on income and family size • Family income considered only if taxes are filed jointly • Any debt remaining after 20 or 25 years will be forgiven	All student borrowers whose monthly payment using the IBR plan would be less than the 10-year standard plan
Income-Contingent Repayment (ICR) Plan	All loans, including consolidation loans	• Monthly payment will be lesser of: ◆ 20% of discretionary income or ◆ Amount you would pay on a repayment plan with a fixed payment over 12 years, adjusted for income • Payments recalculated each year based on income and family size • Family income considered only if taxes are filed jointly and you repay your direct loans jointly with spouse • Any debt remaining after 25 years will be forgiven	All student borrowers

(*continues*)

ILLUSTRATION 6.3.5 **Overview of Federal Student Repayment Options (*continued*)**

Repayment Plan	Eligible Loans	Monthly Payment	Eligibility
Income-Sensitive Repayment Plan	Subsidized and unsubsidized loans	• Payment based on annual income • Up to 15 years	• All student borrowers • Amount of monthly payments varies by lender

Notes:

1. Any amount forgiven may be taxable. Forgiven debt under the Public Service Forgiveness Program does not trigger taxable income.
2. Student loan debt is generally not discharged upon bankruptcy.
3. Discretionary income for the Income-Based Repayment and Pay as You Earn plans is the difference between your income and 150% of the poverty guideline for your family size and state of residence. For the Income-Contingent Repayment plan, discretionary income is the difference between your income and 100% of the poverty guideline for your family size and state of residence.
4. A Public Service Loan Forgiveness (PSLF) Program exists. Those with a federal student loan who work for a public service organization may have the amount of student loans outstanding forgiven after making 120 qualifying payments. This makes the PAYE program, for example, attractive for those working for nonprofit organizations. A 501(c)(3) **not-for-profit organization** or a non-exempt 501(c)(3) organization provides one of the following services:
   - Emergency management
   - Military service
   - Public safety
   - Law enforcement
   - Public interest law services
   - Early childhood education
   - Public service for individuals with disabilities and the elderly
   - Public health
   - Public education
   - Public library services
   - School library or other school-based services

Source: U.S. Department of Education, Federal Student Aid; retrieved from https://studentaid.ed.gov.

The information presented in Illustrations 6.3.4 and 6.3.5 can get complicated. The following examples should help to make things clearer. Let's take a look at two individuals who have taken out student loans, Haley and Nil, and see how they navigated the loan type and repayment decision process. Both students graduated from the nursing program offered by State College, but each financed the education differently.

Although she worked part-time and received some scholarships, Haley borrowed $2,000 a year for each of the 4 years to pay for her schooling expenses.

- Haley completed the FAFSA form online each year, and each year she qualified for both direct subsidized loans and direct unsubsidized loans totaling $5,500.
- Because she only needed $2,000 per year, that is all that she borrowed using the direct subsidized loan, which had an annual interest rate of 4.5%.
- By choosing the direct subsidized loan, the federal government paid the interest on the loan while Haley was still in school.
- When Haley graduated, she consolidated her loans into one **direct consolidated loan** with a balance of $8,000 so that she could simply make one payment each month. She chose a standard 10-year repayment plan with a monthly payment of $83, well within her budget.

Nil's situation differs from Haley's. He's married to Shraya, with one young child. Because they both worked to support their family while attending school, it took Nil 5 years to graduate from State College. They racked up $45,000 in student loan debt. Although they were uncomfortable with this amount of debt, they had already developed a plan for how they would pay the money back. They decided that Nil would work for either a nonprofit hospital or public health organization so they could take advantage of the **Public Service Loan Forgiveness (PSLF) Program**, which allows any remaining student loan balance to be forgiven after the borrower makes 120 (10 years) of on-time payments while working for local, state, or federal government entities or for 501(c)3 not-for-profit organizations.

- Based on this plan, Nil and Shraya consolidated all of Nil's separate loans into two **direct PLUS consolidated loans** with an annual interest rate of 4.5%.
- They selected the Revised Pay as You Earn (REPAYE) plan, which is based on household income, family size, and federal poverty income calculations based on their state of residence.
- Based on their initial household income ($60,000 per year), their first month's loan payment turned out to be $249, although this payment increases annually as their income increases. Under the standard 10-year repayment plan, Nil and Shraya's combined payment would have been $466.
- After 120 on-time payments, the remaining loan balance will be forgiven if Nil works for qualifying public service entities the entire time period, which he plans to do. After 10 years, Nil and Shraya will have paid $17,746 in interest and $12,134 in principal. The remaining $32,866 ($45,000 – $12,134) of principal will be forgiven (for illustrative purposes, this assumes that their income does not change). Student loan debt forgiven through the Public Service Loan Forgiveness (PSLF) Program will not trigger taxable income when the debt is forgiven.
- In this example, Nil and Shraya borrowed $45,000 and made total payments of $29,880 ($17,746 in interest and $12,134 in principal), benefitting significantly from the Public Service Loan Forgiveness (PSLF) Program.
- Nil may have been able to earn more money in the private sector, allowing them to pay back their loan more quickly, but he was committed to working in the public sector. After the loan is forgiven, Nil can work in the private sector and perhaps earn higher wages.

Illustration 6.3.6 shows the repayment outcomes for both situations.

ILLUSTRATION 6.3.6

Comparison of Loan Repayment Options

	Haley	Nil and Shraya
Amount borrowed	$8,000	$45,000
Interest rate	4.5%	4.5%
Standard plan payment amount	$83	$466
Initial loan payment	$83	$249
Repayment plan selected	Standard	REPAYE
Public service loan forgiven	No	Yes
Total interest paid	$1,947	$17,746
Total amount repaid	$9,947	$29,880

HELPFUL HINT

Always remember that any loans you take will need to be repaid from future income, so be considerate of your future self and try to keep loan amounts as low as possible!

When considering the many types of federal loans available, keep in mind that it's best if you don't have to borrow money to complete your schooling (see **Helpful Hint**). Grants and work–study programs, as well as scholarships, provide the best source of school funding. If you do need to borrow to complete your schooling, start with direct subsidized loans and then, if necessary, consider direct unsubsidized loans. For students needing additional financial aid, direct PLUS loans can be used to add borrowing capacity.

Concepts in Action

Brad also attended the nursing program at State College and borrowed a total of $30,000. However, Brad dropped out of the program after 3 years, and the best job he could find is waiting tables. His 6-month grace period has expired, and he must start making loan payments. His annual income is $25,000. Considering the loan repayment options presented in this topic, what would you recommend to Brad?

Solution

The best repayment plan for Brad will likely be the Revised Pay as You Earn (REPAYE) plan with the balance being forgiven after 25 years because he isn't working in the public service sector. Any amount forgiven may be taxable. If Brad took a new job in the public service sector, he could potentially benefit from the Public Service Loan Forgiveness (PSLF) Program. If Brad returns to school at least half-time, he can defer payments on his current student loans and he may qualify for additional loans. At the time of his eventual graduation, he could consolidate his loans and choose another loan repayment option.

End-of-Topic Assessment

Multiple-Choice Questions

1. All of the following are true, *except:*
   - **a.** a fee is required to submit the FAFSA form.
   - **b.** parent information, such as income and assets, may be required when completing the FAFSA.
   - **c.** the FAFSA can be completed online or submitted by mail.
   - **d.** income tax return documents are necessary when completing the FAFSA.
2. Which of the following statements is *true*?
   - **a.** Students receiving financial aid awards may only qualify for one type of federal financial aid.
   - **b.** Students receiving financial aid awards may qualify for all three types of federal financial aid and also receive additional financial aid awards from the state or school.
   - **c.** Financial aid applications are due before the school year starts and cannot be submitted after the start date.
   - **d.** All of the answer choices are true.
3. Federal student loans offer which of the following advantages?
   - **I.** No credit check.
   - **II.** Lower interest rate.
   - **III.** Flexible loan repayment.
     - **a.** I only.
     - **b.** I and III only.
     - **c.** II and III only.
     - **d.** I, II, and III.
4. Which of the following forms of federal financial aid must be repaid once the student is out of school for 6 months?
   - **a.** Work–study awards.
   - **b.** Grants.
   - **c.** Direct subsidized loans.
   - **d.** None of the answer choices are correct.
5. Who is eligible for a federal subsidized loan?
   - **a.** Any student with financial need.
   - **b.** Undergraduate students with financial need.
   - **c.** Parents of an undergraduate student.
   - **d.** Both undergraduate students with a financial need and their parents.
6. All of the following statements regarding federal student loans are true, *except:*
   - **a.** there is no credit report/score check when applying for federal student loans.
   - **b.** federal student loans offer more flexible repayment options compared to private student loans.
   - **c.** federal student loans have loan forgiveness programs for those working in public service jobs, and those who have made on-time payments for 10 years.
   - **d.** private student loans generally have lower interest rates compared to federal student loans.
7. Which of the following types of federal student loans does not accrue interest while the student is enrolled in school (i.e., the federal government pays the interest during that time)?
   - **a.** Direct subsidized loan.
   - **b.** Direct unsubsidized loan.
   - **c.** Direct PLUS loan.
   - **d.** Direct consolidation loan.
8. Which of the following types of federal student loans accrues interest (i.e., adds the interest to the loan balance) or allows the student to pay the interest while still in school?
   - **a.** Direct subsidized loan.
   - **b.** Direct unsubsidized loan.
   - **c.** Direct PLUS loan.
   - **d.** Both direct unsubsidized and PLUS loans.
9. All of the following are benefits of direct consolidation loans, *except:*
   - **a.** only one monthly payment is required.
   - **b.** consolidated loans have a fixed interest rate.
   - **c.** consolidated loans can be discharged in bankruptcy.
   - **d.** All of the answer choices are benefits of direct consolidation loans.

10. Aside from not taking out student loans, the best way to minimize the amount of interest paid on student loans is to:

- **a.** repay them as quickly as possible.
- **b.** consolidate loans.
- **c.** limit borrowing to direct subsidized loans.
- **d.** both repay them as quickly as possible and limit borrowing to direct subsidized loans.

Adventures in Personal Finance

Short Answer

1. Which student loan repayment plans maximize loan forgiveness resulting from 10 years of work for a qualifying public service organization and 120 on-time, scheduled payments?

2. Which repayment plan will most often result in the least amount of interest being repaid?

3. What actions can you take today that will help to limit any increase in future student loan payments?

Explore

1. Match the following loan repayment plans and terms with their definitions. Use the Federal Student Aid website for help.

- **a.** Standard Plan.
- **b.** Revised Pay as You Earn Repayment Plan.
- **c.** Extended Repayment Plan.
- **d.** Graduated Repayment Plan.
- **e.** Income-Based Repayment Plan.

1. Payments start out low and then increase every 2 years. The repayment period is 10 years except for consolidated loans, which may have repayment periods up to 30 years. Payments cannot be less than the periodic interest charge nor greater than 3 times the standard plan payment.
2. Payments are based on the lesser of 20% of discretionary income, or a reduced standard payment amount based on income. Repayment period is 25 years, after which the remaining loan balance will be forgiven. Income tax may be due on the forgiven balance.
3. The repayment period can be up to 25 years. Must have $30,000 or more in direct loans. Payments can be fixed or graduated.
4. Payments are based on income and family size, and are 10% of discretionary income. Monthly payment amounts will not exceed the standard repayment plan amount. Repayment period is 20 years, after which time any remaining balance will be forgiven. Income tax may be due on the forgiven balance.
5. This is the default repayment plan if no other repayment plan is selected. The repayment period is up to 10 years with fixed monthly payments (minimum monthly payment is $50). Consolidation loans are eligible for repayment periods between 10 and 30 years.

2. **Calculate** Go to the Federal Student Aid website to estimate what your payments will be for any federal student loans you currently have or expect to have at graduation. If you expect to have additional student loans, include these additional loans in a separate estimate. How will you afford these payments after graduation?

Expanded Learning Activity

Calculate Based on your previously developed monthly budget, determine how much money you need each year to attend school. Then determine how much you can earn at your job (or could earn if you were to start working part-time) and what federal or state grants you qualify for based on your FAFSA application. What is the difference between your budgeted required expenses and your income and grants? With this information in hand, contact your school's financial aid office or student services office, and find out about what scholarships are available to students. If you're able to receive a scholarship, would this eliminate your need for student loans? If not, what amount of student loans would you need for the year?

Auto Loans

LO 6.4 Develop a vehicle-acquisition strategy that uses an auto loan or lease.

Assets that tend to go down in value (**depreciate**) are referred to as **use assets**. A use asset is something intended to support the current level of living of an individual or household. Many use assets, such as microwaves and lawn mowers, help people save time and effort. Other use assets help people increase human capital and income. Would you ever buy an asset that will, with few exceptions, eventually become worthless? Surprisingly, the answer is yes. In this topic, we discuss one of the most popular use assets: automobiles.

The Value of an Automobile

Depreciation

Many people rely on an automobile to get to school and work and thereby maximize their employment opportunities. The problem is that automobiles tend to decrease in **value** (the combination of the price paid and the quality of the item purchased) over time. This is called **depreciation**. Eventually, use assets, such as automobiles, will no longer work well and will need to be replaced. **Illustration 6.4.1** shows how quickly cars depreciate in value over time (note that a similar pattern of depreciation would occur for vehicles costing more or less than $30,000).

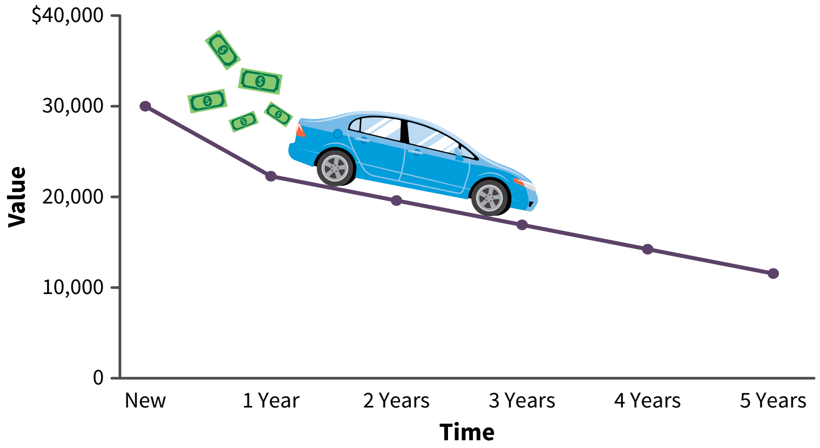


ILLUSTRATION 6.4.1

Average Depreciation for a $30,000 Vehicle

The benefit of a reliable automobile is particularly high in communities that lack sufficient public transportation. In addition to better job opportunities, owning a car might also help to reduce other costs. For example, you may be able to commute to less-expensive housing, shop at lower-cost stores, and avoid paying for other transportation costs. These savings can be substantial and may make a vehicle a financially beneficial purchase.

Determining the Best Value

While the advantages of owning a vehicle are numerous, automobiles can also be a financial trap.

- Some people see a vehicle as something that signals success, wealth, or prestige.
- Although no one wants to drive an old car, going too far the other way and purchasing an expensive car primarily for your image can turn out to be a poor financial decision.

ILLUSTRATION 6.4.2

Top 10 Cars Driven by Individuals with Annual Incomes of More Than $250,000

1. Mercedes Benz E350	**6.** Honda Accord
2. Lexus RX 350	**7.** Honda Odyssey
3. BMW 5 Series	**8.** Toyota Prius
4. BMW 3 Series	**9.** Acura MDX
5. Honda CRV	**10.** Volkswagen Jetta

Source: J. Muller, "What the Rich People Really Drive," *Forbes* (December 30, 2011). Retrieved from http://www.forbes.com/sites/joannmuller/2011/12/30/what-the-rich-people-really-drive/#17df3c1e1728

- *Forbes* magazine found that 61% of households earning more than $250,000 per year—the top 2% of households by income—drive common cars made by **Honda**, **Toyota**, **Volkswagen**, and **Acura** (see **Illustration 6.4.2**).

Following some basic strategies can help you get the best value when it comes time to purchase your next vehicle. Remember, paying a relatively low price for something of relatively low quality is not a good value; it is simply a low-cost purchase. Paying a relatively low price for something of high quality is a good value (see **Helpful Hint**).

ILLUSTRATION 6.4.3

Vehicle-Purchasing Process

Steps in Purchasing an Automobile

Illustration 6.4.3 highlights the steps you should take when deciding to purchase a vehicle. The process shown here can be used when purchasing either a new or used vehicle.

Determining Transportation Needs

Let's review these steps in a bit more detail. The first step is to determine your transportation needs. Questions to ask include: Why do you need a car? How far will you be driving each week? Will you be carrying additional people, tools, or other equipment? If you have children or plan to have children in the next 2 to 3 years, what would be the safest and easiest-to-use vehicle? Your answers to these questions will help identify what, if any, type of vehicle is needed.

Deciding What You Can Afford

When determining how much you can afford (Step 2), you have a few options:

- Withdraw the money directly from savings and pay cash for the car.
- Use a combination of cash for a down payment and borrow the remainder with a loan.
- Borrow the entire purchase price of the car with a loan.

If you are borrowing money to purchase a vehicle, review your monthly budget and determine your excess cash flow each month after contributing to savings and paying your bills. Also, consider how much gas, insurance (Step 5), and maintenance and repairs will cost each month. For example, an oil change for a **Ford** Focus may cost about $25, whereas an oil change for a **Porsche** 911 can be $400! You should also consider any additional income you could earn from owning a car,

such as increased work hours or the possibility of a second job. A word of caution is in order at this point: only consider additional income that is certain, not just possible additional income. **Illustration 6.4.4** can be used to help organize the information needed at this step in the process (see **Helpful Hint**).

HELPFUL HINT

The total available amount for a car payment each month is your excess cash flow minus the costs of ownership.

ILLUSTRATION 6.4.4

Calculating How Much You Can Afford

Excess monthly cash flow available for vehicle payment and maintenance	$
Less: Gas	−$
Less: Insurance	−$
Less: Maintenance	−$
Less: Repairs	−$
Amount remaining for automobile loan payment	$
Plus: Income earned from vehicle ownership (e.g., a second job)	+$
Maximum amount that can be allocated for payment	$

Using Illustration 6.4.4 as a guide, assume that Stefanie knows that she has $400 in excess cash flow available per month. She is thinking that a 2-year-old Honda Civic would be an ideal car to own.

- After doing some calculations, she determines the following monthly car-ownership expenses: $50 for gas, $75 for insurance, $20 for maintenance, and $25 for repairs (see **Helpful Hint**).
- She doesn't anticipate any additional income from owning the car.
- The amount that Stefanie can spend on a monthly car payment is $230, as shown in **Illustration 6.4.5**.

HELPFUL HINT

Some states also charge personal property taxes on vehicles so be sure you know your state's laws.

ILLUSTRATION 6.4.5

Stefanie's Affordability Calculation

Excess monthly cash flow available for vehicle payment and maintenance	$400
Less: Gas	−50
Less: Insurance	−75
Less: Maintenance	−20
Less: Repairs	−25
Amount remaining for automobile loan payment	$230
Plus: Income earned from vehicle ownership	+0
Maximum amount that can be allocated for payment	$230

Shopping for an Automobile Loan

Step 3 is to shop for a loan (see **Helpful Hint**). You should limit your loan shopping to a 2-week period so that the impact of multiple credit inquiries made during this time will be minimized.

- Every time car dealers run a credit report on you (they often do this before allowing you to take a test drive), an inquiry will show up on your credit report.
- Not only will dealers know where you have been shopping, they'll know if you are actually qualified to buy.

HELPFUL HINT

Before you contact any lenders, make sure that you have reviewed your credit report for any errors that could potentially drag your credit score down. Remember, an inaccurate report can cause you to pay more in interest or disqualify you from obtaining a loan.

Because you know the maximum payment that you can afford each month (Step 2), two other variables will determine the loan amount that you qualify for:

1. The interest rate.
2. The loan term or repayment period.

Assuming the monthly payment amount is fixed based on your budget, two rules then apply when searching for an auto loan. First, the lower the interest rate, the more you can borrow (or the higher the interest rate, the less you can borrow). Second, the longer the loan term, the more you can borrow. But remember—you will also pay more interest. **The key variable to negotiate in an auto loan is the lowest interest rate possible**.

- You should obtain at least three loan offers from different banks and credit unions before going to a dealer.
- You'll need to submit to a credit check at each bank or credit union because that is the only way to know exactly what interest rate they will charge.
- By doing this, you can get preapproved for a loan and find out the specific loan amount and terms for your car purchase.

HELPFUL HINT

You can also use a calculator to quickly determine the present value.

Let's now help Stefanie figure out what kind of car she can get for $230 per month. (You may need to revisit the time value of money discussion if these calculations seem a bit confusing.) If she can get a 4-year, 5% loan, Stefanie can use the present value of an annuity formula, with $230 as her payment, 48 as the number of payments (4 years × 12 months), and 0.4167% as the monthly interest rate (5% ÷ 12), to calculate the present value as follows (see **Helpful Hint**):

$$PVA_i = \frac{PMT}{i}\left[1 - \frac{1}{(1+i)^n}\right] \qquad \text{Loan Amount} = \frac{\$230}{0.00417} \times \left[1 - \frac{1}{(1+0.00417)^{48}}\right] = \$9{,}986.49$$

Stefanie can now start in earnest to find a good reliable car for just under $10,000.

Concepts in Action

Your friend Harry is excited to buy his first car! He is looking for a reliable used car that costs around $10,000. He has received the following three auto loan offers:

1. A 60-month loan with a fixed 3.32% rate.
2. A 48-month loan with a fixed 2.85% rate.
3. A 36-month loan with a fixed 2.81% rate.

Which should Harry choose if his primary goal is to obtain the lowest monthly payment? Does your answer change if Harry is interested in the total cost associated with the loan?

Solution

You'll need to use a time-value-of-money calculator, an online loan calculator, or formula to answer this question. To calculate the monthly payment, use $10,000 as the present value, the loan duration stated, and the interest rate divided by 12 as the interest input. The formula to calculate a payment on a loan is:

$$PMT = \frac{i(PV)}{1-(1+i)^{-n}}$$

If Harry is interested in the lowest monthly payment, he should choose Option 1. The loan payment for Option 1 is $181.11, which is lower than the Option 2 loan payment ($220.68) or Option 3 ($289.98). However, Option 3 should be chosen if he is interested in minimizing total costs. Harry's total cost for Option 3 is $10,439.28 (36 payments × $289.98), which is lower than Option 1 ($10,866.60) or Option 2 ($10,592.69). If Harry's car is not of good quality, then it may not last 5 years, in which case it would not be wise to have a 5-year loan. If he pays off his loan early, he'll save some interest expense.

Researching and Identifying the Best Vehicle

Once you're preapproved for a loan, you'll know the price range of vehicles that are appropriate for purchase. You can then move to Step 4, researching and identifying the best vehicle models.

You can find information about used vehicles' reliability and repair histories online (see **Helpful Hint**). You can also obtain ratings of fuel efficiency, cost to insure, and likely repair issues. Doing research will help you identify specific vehicles to look for in your local market.

HELPFUL HINT

Online research sources include Edmunds.com, Consumer Reports, and J.D. Power.

Obtaining Insurance

Once you have identified specific vehicles (year made, manufacturer, and model), you can complete Step 5 of the purchasing process by contacting your insurance company to find out what it will cost to insure your potential new ride. Your credit score can also impact the cost of your insurance, with higher credit scores resulting in lower insurance costs. Automobile insurance is discussed in greater detail in a later chapter.

Negotiating the Price

Step 6 involves locating your car and negotiating a price.

- Yes, you can negotiate! The seller needs to sell the car more than you need to buy it.
- Be sure to make your search area as large as possible so that you can find the best options.
- Auto dealerships can be good places to look for used cars.
- The best values generally come from private sellers advertising in online classified services or through the local newspaper or national classified companies.

Buying versus Leasing

Car Lease

Although many personal finance experts recommend purchasing a used car rather than a new car, you also have the option of leasing a vehicle.

- A **lease** is a financial agreement between you and the dealership where you agree to pay a certain price for the right to drive the car for a set period of time.
- Car leases typically last around 3 years.
- Nearly all leases limit the miles that can be driven yearly to about 12,000.
- At the beginning of the lease, there are lease inception fees, which include title fees, acquisition fees, security deposits, and other fees.
- At the end of the lease, you may purchase the car and pay a purchase fee, or you may return the car to the dealership and pay a disposition fee.

Lease payments are much lower than loan payments, and you get to drive a new car every few years. However, with a lease, at the end of the lease period, **you have not accumulated any equity in the car and you don't own anything** (see **Helpful Hint**).

HELPFUL HINT

Equity is the value of the asset less any debt associated with that asset. When you buy a new or used car, after making payments for 3 years you will have built up considerable equity in the vehicle and own a valuable (albeit depreciating) asset.

Comparing Purchasing and Leasing Options

Let's assume that you're looking for a good-quality compact car to get you around town safely and reliably. You find that **J. D. Power** recently ranked a Buick Verano as one of the most reliable compact used cars over the past 3 years based on car owner reviews. Let's investigate your purchase and lease options with a new or used Buick Verano.

- Let's assume that you have good credit and can get a 5-year auto loan at 1.99% APR for a new or used car.
- If you were to **purchase a new** Buick Verano, it would cost about $21,000. Your monthly payment would be approximately $368.
- If you were to **purchase a used** Buick Verano in very good condition from a private party, it would cost approximately $12,700. The monthly loan payment would be about $223 (see **Helpful Hint**).
- If you were to **lease a new** Buick Verano, you would have approximately $2,200 in acquisition fees and the monthly payment would be $199.

HELPFUL HINT

The best vehicle values can generally be found when buying a 2- to 3-year-old used car from a private (individual) seller rather than a dealership.

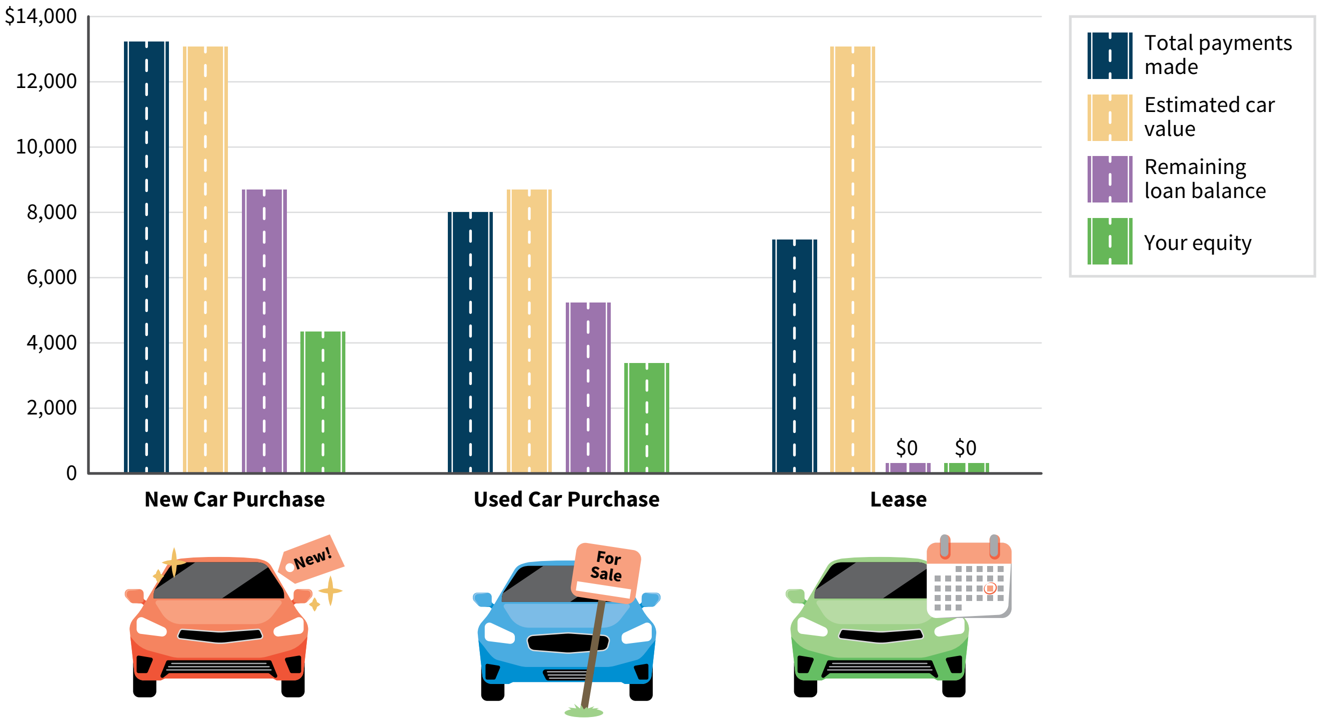
Based on typical car depreciation rates, **Illustration 6.4.6** depicts what your financial situation might look like 3 years after your purchase. You can see that in total, the amount that you have paid for the purchase of your car after 3 years is lowest for the used car option. You can also see that by purchasing a used car, you pay much less and end up with almost the same amount of auto equity after 3 years compared to purchasing a new vehicle. If you leased the car, your equity after 3 years of payments would be zero.

This comparison doesn't consider auto repairs on the used vehicle, so depending on the car that you purchase, you'll need to take that into consideration. Further, although a reliable used car is likely to provide the best option for your money, don't automatically exclude new cars. Occasionally, dealers will offer a good price on a new car that meets your budget (and remember that warranties on new cars help reduce potential costs of ownership). This can make purchasing a new car more competitive (see **Helpful Hint**).

HELPFUL HINT

The key takeaway is to do your homework, keep your options open, and choose the best alternative that meets your budget.

ILLUSTRATION 6.4.6 **Car Ownership Scenarios 3 Years After Purchase**



End-of-Topic Assessment

Multiple-Choice Questions

1. What makes a vehicle a bad investment?
   - **a.** As a use asset, car values nearly always decline over time.
   - **b.** The quality of cars made today is so low that there is no value in owning a car.
   - **c.** The value a car adds to a household's ability to increase human capital is too high to warrant the cost of insurance.
   - **d.** It is impossible to justify owning a car if someone has to borrow money for the purchase, which makes cars a bad investment choice.

2. When making an automobile purchase decision, you should always attempt to find the vehicle that provides the ___________ price and the ___________ quality.
   - **a.** lowest; lowest
   - **b.** highest; highest
   - **c.** lowest; highest
   - **d.** highest; lowest

3. When searching for a vehicle to purchase, which of the following variables is an important factor in the purchase decision-making process?
   - **a.** Reliability.
   - **b.** Safety.
   - **c.** Cost efficiency.
   - **d.** All of the choices are correct.

4. Which of the following purchase strategies will generally generate the lowest cost for someone purchasing a vehicle?

a. Using money from savings to fund the entire purchase.

b. Using a small amount of savings for a down payment and borrowing the remainder.

c. Borrowing 100% of the purchase price.

d. Liquidating high-return stock and mutual fund investment to fund the entire purchase.

5. Which of the following individuals is in most need of a personal vehicle?

a. Lubor, who lives within walking distance to public transportation in New York City.

b. Nicole, who lives in the suburbs but works in a city 35 miles from her home.

c. John, who is retired and living in a nursing home.

d. Michelle, who is in high school and wants a more convenient way to get to school.

6. Maribelle is looking to purchase a car. She is considering all of her options. She is a college student working 30 hours per week. She has been riding the bus to work and school, but it requires 2 hours per day of transit time to get to work (about 25 miles round-trip). If she had her own car, she could cut this time down to 40 minutes per day. Based on this information, which vehicle choice would be the best for Maribelle?

a. Compact luxury car.

b. Full-size pickup truck.

c. An electric vehicle.

d. Inexpensive compact car.

7. **Calculate** How much can Jorge afford to spend on a monthly car payment if his excess monthly cash flow is $380, and he expects the following monthly expenses: $45 gas, $90 insurance, and $20 for maintenance and repairs?

a. $75.

b. $225.

c. $380.

d. There is not enough information available to answer this question.

8. Melba has been shopping for a new car. She has already visited four dealerships where she test-drove six cars. When she went to the fifth dealership, the salesperson asked where else she had been that day. Melba lied and said she was just now starting to look at cars. How did the salesperson know that Melba was lying?

a. The salesperson could tell by looking at the condition of her current car.

b. Car dealerships call each other on a daily basis indicating who has been shopping that day.

c. The salesperson has a unique mind-reading ability.

d. Melba's credit report showed that other dealers had accessed her credit score before she test drove their cars.

9. A(n) ____________ in the loan interest rate and a(n) ____________ in the loan duration will increase the monthly auto loan payment.

a. decrease; increase

b. increase; decrease

c. increase; increase

d. decrease; decrease

10. **Calculate** What will be the monthly payment on a car loan if the purchase price is $18,000, there is no down payment, the loan rate is 4.5%, and the loan duration is 5 years? (*Hint*: You may need to review time value of money calculations.)

a. $300.00.

b. $335.57.

c. $468.42.

d. $4,100.25.

Adventures in Personal Finance

Short Answer

1. Describe the pattern in which vehicles decrease in value over time. Given this pattern, when is the best time to purchase a vehicle?

2. Several factors affect the equity in your car over time. Identify at least three primary factors that determine a vehicle's equity during the first 5 years of a vehicle's life. How does the influence of these factors change over time?

3. Place the following vehicle-purchasing steps in the correct order.

______ **a.** Determine how much you can afford.

______ **b.** Figure out what your transportation needs are.

______ **c.** Locate the specific vehicle you will purchase and negotiate a purchase price.

______ **d.** Obtain an estimate for auto insurance based on the specific car you are investigating.

______ **e.** Research specific models of vehicles and identify those that best meet your needs and budget.

______ **f.** Shop for a loan if you plan to borrow money.

4. Many auto dealers who also provide financing like to negotiate the monthly loan payment with their customers. Why should you never make monthly loan payments the key point in negotiations?

5. Describe ways a consumer can evaluate the issue of price compared with quality when doing research about a car purchase. What sources of information are available to help consumers better understand the trade-off between price and quality?

6. How does routine maintenance affect the financial outcome of owning a vehicle?

7. Describe the circumstances when a lease may be more financially beneficial than owning a car. Are these circumstances likely to persist long term or be just temporary?

Explore

1. Contact two financial institutions in your community and then complete the following table for each of the credit score ranges.

Lender	Credit Score	Loan Term	APR	Total Finance Charge
1.	Above 720	36 months		
		60 months		
	620–720	36 months		
		60 months		
	Below 620	36 months		
		60 months		
2.	Above 720	36 months		
		60 months		
	620–720	36 months		
		60 months		
	Below 620	36 months		
		60 months		

2. Rank the following categories of vehicles from least expensive to most expensive from an insurance perspective. Assume that all cars are current-year models. (*Hint:* You will need to research insurance estimates using the Internet.)

- **a.** Minivans.
- **b.** Small or mid-size SUV.
- **c.** Sports cars.
- **d.** Full-size trucks and SUV.
- **e.** Sedans.
- **f.** Luxury imported cars.
- **g.** Compact cars.

3. **Presentation** Do an Internet search to find the fuel efficiency for five different types of vehicles, such as a small truck, sedan, hybrid compact, SUV, and sports car. Be sure to include the exact make, model, and year for each vehicle you select. Summarize the information into a table that can be shared with others in class. Based on your research, which of the vehicles would you consider purchasing? Why?

Expanded Learning Activity

Writing **Presentation** According to the Federal Trade Commission, "A service contract is a promise to perform (or pay for) certain repairs or services. Although a service contract is sometimes called an extended warranty, it is not a warranty as defined by federal law. A service contract may be arranged any time and always costs extra; a warranty comes with a new car and is included in the original price. Used cars also may come with some type of warranty coverage included in the sales price. The separate and additional cost distinguishes a service contract from a warranty." Many consumer advocates argue that service contracts are a consumer rip-off; however, there may be times when a service contract makes sense. Research the difference between a service contract and a new or used car warranty and determine when a service contract may be an appropriate choice for a car owner. Write the results of your research in a brief report. Share the results of your study with other students.

Housing: The Basics of Renting

LO 6.5 Know the basics of renting a home or an apartment.

As you read this, you may be living at home, in a dorm, or on your own. You may be living by yourself, with roommates, or with a partner. At some point, however, it is likely that you'll move. You'll then be faced with a number of housing options (city or suburb, apartment or house) and financial alternatives (buy versus rent). In this topic, we review what you should know before and while you rent.

Renting versus Buying

Illustration 6.5.1 provides a snapshot of how renting and buying differ. As shown, renting and buying offer unique benefits and drawbacks. Although you may ultimately want to buy something at some point, you'll most likely start off in your financial journey by looking for a place to rent.

ILLUSTRATION 6.5.1

Renting Versus Buying: The Key Differences

	Renting	Buying
Benefits	• Flexible in the short term • Allows the option of moving • Don't need to worry about repairs • Costs fixed for duration of lease • Sometimes utilities included in cost of lease	• Long-term stability • Allows owner to build value over time • Some costs (interest and taxes) may be tax-deductible
Costs	• Application fee • Security deposit • First and last month's rent • Fixed monthly cost • Early termination of lease fees	• Homeowner's insurance • Mortgage application fees • Down payment • Closing costs and fees • Fixed or variable monthly cost depending on loan
Repairs and Maintenance	• None—provided by landlord • Limited ability to make improvements or changes	• Owner pays for all repairs • Some expenses may be included in a homeowners' association (HOA) fee to pay for amenities and yard maintenance
Taxes	• None—paid by landlord	• Owner pays all city and state taxes • Taxes paid may be tax-deductible

Duration	• Typical length of lease:
	  • Month-to-month (rare)
	  • 3-, 6-, 9-, or 12-month (common)
		• May live in home indefinitely as long as mortgage, taxes, and HOA fees are paid

Source: Fannie Mae, 2016.

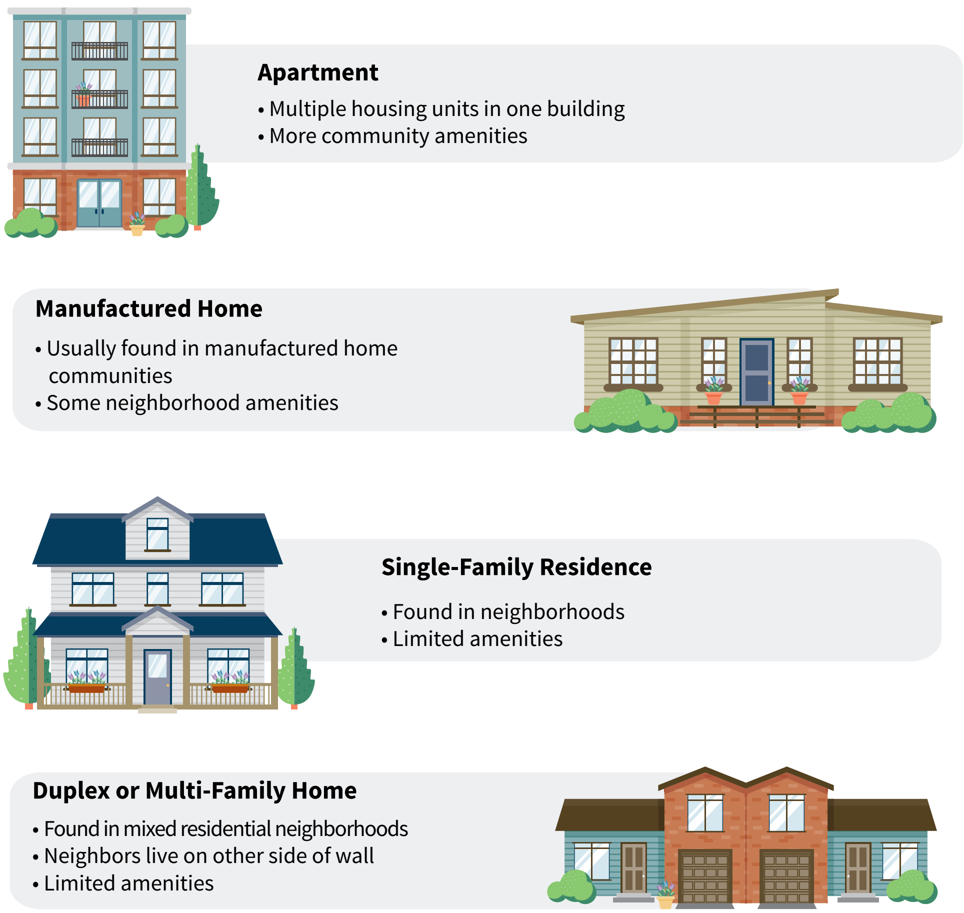
Finding a Rental

> **HELPFUL HINT**
> **If you're already renting, this is a good opportunity to review your current lease and living situation.**

Because most households spend the largest percentage of their monthly budget on housing—somewhere between 30% and 50% of total monthly income—it's essential that you understand the basic terms, procedures, and rules associated with renting a place to live (see **Helpful Hint**).

When you start thinking about renting a place to live, apartments probably come to mind first. However, as a renter, you have many alternatives. **Illustration 6.5.2** provides an overview of some of the most popular types of rentals.

ILLUSTRATION 6.5.2
Types of Rentals



Determining Location

Once you identify your preferred type of housing unit, it's time to focus on where you want to live. There's an old saying that sums up the housing market: location, location, location. This is just a simple way of saying that where you're looking to rent will often determine the price you'll pay. Factors such as proximity to good schools, safety, things to do, and other amenities drive prices up. In other words, the neighborhood you choose will help shape how much you pay.

One way to start the search process is shown in **Illustration 6.5.3**.

- Safety should be a high concern.
- The overall condition of the neighborhood is important: the buildings and houses should be well maintained.
- Make sure that you're close to work/school, shopping, restaurants, and fun things to do.

ILLUSTRATION 6.5.3 **Neighborhood Factors That Affect Your Location Choice**

- Other factors, such as the school district, matter.
- In general, you'll find that neighborhoods that surround high-quality schools have the most amenities—such as recreational centers, parks, and shopping—and the lowest crime (see **Helpful Hint**).

HELPFUL HINT

If you ever need to move before your lease is up, it helps to live in a high-demand neighborhood because it will be easier for the landlord to find a new tenant quickly.

Determining a Budget

When you enter the rental market, you are competing against what others are willing to pay and what the **landlord** (the person or company that owns the property you hope to rent) is demanding. Landlords, of course, want to maximize their profit. According to the **U.S. Department of Housing and Urban Development (HUD)**, landlords may encourage you to spend up to 50% of your gross monthly income on rent. In some large cities you may, in fact, need to do this. But generally, HUD suggests that you spend no more than 30% of your pretax income on rent. For example, if you make \$3,000 per month before taxes, you should pay no more than \$900 of your income on rent (\$3,000 × 30% = \$900). In many instances, you can spend less than 30% of income on rent and have sufficient housing, leaving more money to spend on other items.

Once you determine your budget, you may discover that you simply can't find a place to live that offers the features you need and want at the price you can pay. In these situations, you have a few choices:

1. You can sacrifice location and amenities for lower rent.
2. You can look for a roommate to help make things more affordable.
3. You can ask someone to be a guarantor or co-signer for the rent payment. A **guarantor** is someone, like a parent or relative, who agrees to pay your rent in case you fail to make rental payments. If your credit score is low, you don't have a credit report, or you've never rented before, it's likely that your landlord will require a guarantor. (This is just one more reason to establish an outstanding credit score at an early age.)

Obviously, these solutions have drawbacks. Roommates, for example, are not always reliable. You may find yourself stuck with rent and damage that you must pay for if your roommate walks away. Having someone co-sign for your rent can sometimes cause hurt feelings and family arguments, especially if the co-signer needs to step in at some point to make rental payments for you.

Assessing the Rental Property

Once you've located a place to live, there are a few activities you need to complete.

- Carefully look at the property to make sure that it is well maintained. You do not need an engineering degree to do this. Are the carpets and walls clean? Do all the included appliances work? Is the outside painted? If something needs to be fixed, ask the landlord to take action before you sign any rental agreement.
- Be sure to drive around the property at night. Is it well lit and quiet? Is there adequate parking?
- Consider asking others who live in the neighborhood how they like living there (see **Helpful Hint**).

HELPFUL HINT

Online reviews might be available for some rental properties; don't forget to check them out!

As shown in **Illustration 6.5.4**, if everything looks okay, it's time to read and sign a lease.

ILLUSTRATION 6.5.4

Three Questions to Ask Before Signing a Lease

The Rental Lease

A **lease** is a legal document that outlines the terms of the rental agreement. A lease is intended to protect both the landlord and renter (you) by clarifying what is required of both parties. The following are the basics of what to look for in a lease (see **Helpful Hint**).

HELPFUL HINT

You can negotiate the price and terms of a lease. Some points of the lease may be non-negotiable, but you won't know unless you ask.

Rental Costs

As with everything in life, renting comes with costs and fees. Fortunately, when you rent and sign a lease, you'll know upfront what most of your monthly costs are going to be in the future. Once you start comparing places, be sure to use the following questions to guide the decision-making process.

- How much is the monthly rent? What is included (e.g., cable, phone, utilities)? When is the rent due? Who is the rent paid to and where? When does the lease terminate?
- What fees are required when you sign the lease?
- Will there be an **application deposit**, which is used in case your application is accepted but you decide not to move in? If you're rejected by the landlord, will you receive this deposit back?

- How much is the **security deposit**, which is money paid in advance to cover the cost of excess damage you might cause while living in the house or apartment? What is necessary to get 100% of your security deposit back at the end of the lease?
- Are pets allowed? If so, is there a required **pet deposit** to help offset damages caused by animals living with you in the property (see **Helpful Hint**)?
- If you move out before the lease termination, will the landlord require a **reletting fee** to cover the cost of renting the apartment again? Will you be required to pay all remaining rent until the apartment is leased by someone else (unless you are in the military)?

HELPFUL HINT

The average pet deposit is $400. Cats tend to be more acceptable to landlords. Landlords typically limit the size of dogs to 25 pounds or less.

Other Lease Terms

Moving to a new place is often a fun experience. There are new things to see, new people to meet, and new opportunities to create a décor that matches your personality. Unfortunately, moving into a rental can sometimes also create tensions with a landlord if you're not totally clear on what you've signed up for in a lease. As such, it's important to make a special note of the following lease terms before putting your signature on the move-in form:

- What happens if you make a late rental payment? For example, is there a penalty or does this prompt an eviction notification? An **eviction** occurs when a landlord removes a tenant (renter) from the property for breaking a clause in the lease, such as not paying rent on time. The timing of an eviction is determined by state law.
- Are you allowed to have a roommate?
- Does the landlord allow you to sublet the property? **Subletting** refers to allowing someone else, not originally on the lease, to live in the home and pay rent. Keep in mind, however, that even if allowed, you will likely be held responsible for all damage done by the subletter.
- What are the landlord's obligations to make needed repairs, and how do you request a repair?
- What do you need to do when you move out? Some landlords may require the apartment or house to be professionally cleaned. Often, the landlord will use your security deposit to make repairs and to pay for cleaning.

Illegal Rental Provisions

As a renter, you have rights as well as responsibilities. In general, the following lease provisions and requirements are considered illegal in most states:

- A provision that allows a landlord to seize your property if you fail to pay the rent.
- A provision that makes you pay for the landlord's legal expenses if you go to court.
- Any provision that requires you to pay for damages not caused by you or your guests.
- A provision that allows the landlord to enter your home without proper notice.
- Any provision that limits a landlord's responsibility or liability for which he or she would normally be responsible.
- Any provision that makes you give up your right to defend yourself in court.
- A provision stating that you will not join a tenants' union.
- Any provision that makes you pay for normal wear and tear.
- The lack of a reasonable grace period for a rental payment.
- A security deposit that is significantly larger than the rent payment.
- Excessive late fees.

If you disagree with any of the lease terms, you can often negotiate them with the landlord before finalizing and signing the lease. If any of the usual lease terms seem to be missing from the agreement, you should discuss these items with the landlord and have them added before finalizing and signing. Remember, the lease also exists to protect your rights as a renter.

Renter's Insurance

HELPFUL HINT

You may be covered under your parent's homeowner's policy, so double-check with them.

You might think that once your lease is signed, you are all set. Well, almost. You have one more purchase to make: renter's insurance. **Renter's insurance**, although an optional budget expense, pays for your lost, damaged, or stolen property even if the loss doesn't occur in the rental. Landlords are not responsible for your property, so you really do need this coverage, which is only about $125 per year. You can get coverage wherever you have your automobile insurance (see **Helpful Hint**).

Concepts in Action

Max has just accepted a new job with a salary of $28,000 and must relocate to a city a few hundred miles away. He has found a great rental apartment within walking distance to work. As Max starts reading the lease agreement, he notices a few things that make him wonder whether he should sign or walk away. Given the following lease terms, would you advise Max to sign this lease?

- $1,100 monthly rent that includes all utilities.
- $4,000 security deposit.
- A late fee of $350 if rent is received 1 day late, plus an additional $25 per day fee for every additional day late.
- Tenant responsibilities:
  - Pay for the cost of repairing wear and tear.
  - Pay for the cost of building repairs based on the size of the apartment.
  - Agree to a "no-sue" agreement if the landlord violates the local sanitary code.
  - Agree not to join a tenants' union while living in the apartment.

Solution

You should recommend that Max not sign this lease. Even if the apartment is wonderful, nearly all aspects of this particular lease are illegal in most states. Although it's acceptable (and maybe preferred) if the utilities are included in the lease, the amount of the security deposit is too high in relation to the rental payment. Also, most states allow renters a grace period for rental payments. None of the tenant responsibilities are legal.

Tenant Rights

A lease ideally protects both the landlord and renter (tenant). However, when you read a typical lease, you may feel like the document is really written to protect the landlord. For example, the lease details what you can and can't do while living on the property. The lease also describes what will happen if you break the lease, need to leave early, or cause damage beyond normal wear and tear. All of this is described from a landlord's perspective. Rarely does a lease indicate what happens if a landlord fails to maintain a property or how you, as a renter, can better ensure your rights as a tenant.

General Rights of Renters

HELPFUL HINT

The U.S. Department of Housing and Urban Development (HUD) provides a state-by-state listing of specific tenant rights.

The good news is that even though the typical lease does not describe them, you do have rights as a tenant. Each state has unique landlord–tenant rules that are worth reviewing before signing any lease (see **Helpful Hint**). If, as a renter, you have attempted to resolve an issue with a landlord without results and have documented each attempt in writing, you can always turn to your state's attorney general's office or, in some situations, a local legal

aid organization. Generally speaking, though, you can expect to have the following rights enforced anywhere you rent property:

- The right to a written lease.
- A safe environment, which includes working door locks and smoke detectors, functioning windows, and no illness-producing factors such as mold.
- Working heating and cooling systems and working plumbing.
- Quiet times during the evening and day, and advance notice of repairs in the house or unit.
- The right to ask the landlord to ask others who are also renting to abide by rules related to playing music or televisions loudly and partying.
- The right to timely repairs.
- A legal and orderly eviction process. A landlord may not lock a tenant out of his or her apartment during the eviction process, take retaliation against a renter, or take possession of a renter's property as payment for unpaid rent.

Return of Security Deposit

As a tenant, you also have a right to your security deposit. Often, however, landlords claim that renters have caused damage beyond normal wear and tear, which entitles the landlord to hold some or all of the deposit. When this happens, it almost always results in a "she said–he said" argument (see **Helpful Hint**). **Illustration 6.5.5** offers tips that will help ensure that you get all of your security deposit back when you move out. Remember, the best way to protect your rights is to be proactive!

HELPFUL HINT

The Vermont Law Help website notes that the best way to get your deposit back is to document the condition of the rental before moving in and after moving out by taking videos and then presenting them to the landlord.

ILLUSTRATION 6.5.5

Tips for Getting Your Security Deposit Back When You Move Out

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following attributes is associated with renting?

- **a.** Down payment.
- **b.** Application fee.
- **c.** Unlimited privilege to use property far into the future.
- **d.** Tax-deductible monthly expenses.

2. Which of the following is the most important neighborhood factor that should shape someone's apartment hunting search?

- **a.** Quality of schools.
- **b.** Location of restaurants.
- **c.** Access to movie theaters and other activities.
- **d.** Safety.

3. **Calculate** Haley just graduated from college. She accepted a position with a firm at an annual salary of $40,000. Using HUD guidelines, what is the maximum Haley should pay for rent on a *monthly* basis?

- **a.** $12,000.
- **b.** $4,000.
- **c.** $1,333.
- **d.** $1,000.

4. Someone who guarantees that a renter will either pay the rent on time or make the payment for the renter is called a:

- **a.** co-signer.
- **b.** tenant.
- **c.** roommate.
- **d.** reletter.

5. Which of the following reasons might require you to get a guarantor for a lease agreement?

- **a.** You have a low credit score.
- **b.** You do not have a credit report.
- **c.** You have never rented before.
- **d.** All of the answer choices are correct.

6. Money paid in advance to cover the cost of excess damage you might cause while renting is called a(n):

- **a.** reletting fee.
- **b.** application deposit.
- **c.** security deposit.
- **d.** renter's insurance.

7. Although most landlords make a tenant pay extra for a pet, which of the following pets tends to be the most acceptable among landlords?

- **a.** Cat.
- **b.** Small dog.
- **c.** Large dog.
- **d.** Alligator.

8. Which of the following is an illegal lease clause?

- **a.** Forbidding you to have a pet.
- **b.** Forbidding you to have a roommate.
- **c.** Requiring you to pay for normal wear and tear.
- **d.** Requiring you to pay an early lease termination fee.

9. When you rent an apartment, you are entitled to which of the following?

- **a.** Paid cable and Internet.
- **b.** Quiet times during the day and evening.
- **c.** A refund of your application fee if you are accepted into an apartment complex but decide not to move in.
- **d.** All of the answer choices are correct.

10. Which of the following will increase wear and tear and decrease your chances of getting 100% of your security deposit back?

- **a.** Hosting parties on a regular basis.
- **b.** Vacuuming twice per year.
- **c.** Letting things stay in the refrigerator for months at a time.
- **d.** All of the answer choices are correct.

Adventures in Personal Finance

Short Answer

1. Explain the difference between a landlord and a renter.
2. What additional fees can a landlord impose or require you to pay in addition to rent?
3. What factors help determine the amount a landlord charges as a security deposit?
4. Describe the advantages associated with purchasing renter's insurance.

Explore

1. Imagine that you were going to move to your first (or a new) apartment in the next 6 months. Evaluate and rank the following list of amenities that you would want to have in your next rental (1 = most important, 16 = least important). Next, do a search where you want to live to determine if any dream properties exist and, if yes, what the monthly cost is right now. If the rent is too high, what amenities can you live without?

Amenities		Comparisons	
Amenity	**Rank**	**Apartment Complex**	**Total Monthly Cost**
Laundry in the apartment		1.	$
Laundry in the apartment complex			
Dishwasher		2.	$
Indoor parking			
Pool		3.	$
Fitness center			
Storage space		4.	$
Garage			
Fireplace		5.	$
Cable TV included in rent			
Pets allowed		6.	$
Playground			
Spa		7.	$
Internet access			
Balcony or patio		8.	$
Other ________________________			

2. **Writing** **Presentation** Sometimes the apartment of your dreams may be unaffordable. Many financial planning experts recommend that in these situations you should find a roommate to help offset rental expenses. Interview two friends to get their opinions on the benefits and disadvantages associated with having a roommate. Write a brief report based on your findings and share your results with your class.
3. **Writing** Contact an insurance agent (either in person or online). Ask the agent to provide information about renter's insurance. Write a brief summary of the advantages of such coverage, the cost involved in purchasing the coverage, and any additional responsibilities you might have once you receive coverage.
4. **Writing** **Presentation** Visit the Vermont Law Help website to obtain information about actions someone can take to get back a security deposit. Be sure to review your own state's laws to determine if there are additional options available. Write a brief report and share your findings with others in class.

Expanded Learning Activity

Writing **Presentation** Visit the U.S. Department of Housing and Urban Development website. Click on the link to your state, and conduct a review of the basic landlord rights and responsibilities under your state laws. Write a brief report and share your findings with others in class.

Buying a Home

LO 6.6 Describe the necessary considerations and benefits associated with purchasing and owning a home.

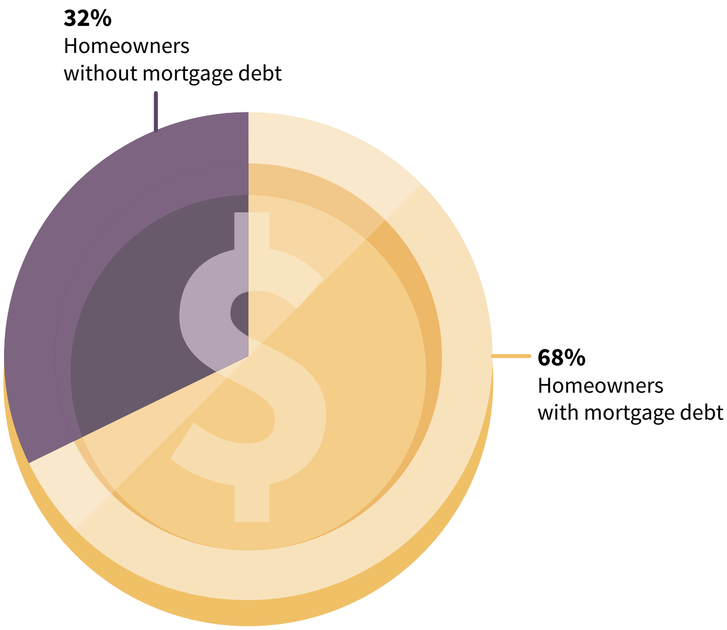
One of your financial goals may be to own a house someday, especially if you plan on living in the same location for five years or more. But buying a home is expensive. For most Americans, it is the single-largest purchase that they will make in their lifetime, and it is a key component of building long-term wealth. In this topic, we describe the steps you need to take to own and manage your own home.

Owning a Home

Housing wealth represents more than half of many Americans' total net worth. According to a recent U.S. Census Bureau report, about 65% of households in the United States own their home. As shown in **Illustration 6.6.1**, nearly 68% of homeowners still owe money on their home, while only 32% own their home free of any debt. Home debt is known as a mortgage.

ILLUSTRATION 6.6.1

Percentage of Homeowners Who Still Owe Money on Their Home



Mortgage

A **mortgage** is a special type of loan that is secured by **real property**—land and all improvements on a piece of land, including a personal residence.

- Generally, mortgages have long repayment periods, most commonly 15 or 30 years.
- Because the loan is secured by the real property—in this case a house and associated land—if the homeowner fails to make the monthly mortgage payments, the lender can take possession of the house and sell it to another buyer in a process known as **foreclosure**.

Although there are tremendous benefits associated with homeownership, such as wealth accumulation, housing stability, neighborhood and community enhancement, and benefits to children, there are certainly risks associated with homeownership as well. These most notably include possible foreclosure and financial strain from high monthly mortgage payments. In this discussion, we focus on how to make homeownership a positive experience rather than a negative one.

Determining What Is Affordable

If your job and income are stable and you plan to live in the same community for several years, then homeownership may be a good choice (see **Helpful Hint**). The key to having a good homeownership experience is knowing what you can afford and finding a home that doesn't exceed your ability to make payments.

- Many of the financial tools that you have already learned, such as budgeting and managing your credit, are essential to knowing what houses are within your price range and obtaining an optimal loan.
- With your budget, you can see how steady your income and expenses are from month to month, which will help you better estimate an affordable mortgage payment.
- Your budget should also include the associated extra expenses of owning a home, such as maintenance, homeowner's insurance (also referred to as **hazard insurance**, which is an insurance policy that will reimburse you if your home and belongings are destroyed or stolen), and property taxes. A **mortgage insurance** premium, which is an insurance policy that protects lenders from nonpayment of the loan, is required if more than 80% of the value of the home is borrowed.
- Before you start looking for a home, you will also want to make sure your credit report is clean of errors and negative events so that you can qualify for the best interest rate on your mortgage.

HELPFUL HINT

The U.S. Department of Housing and Urban Development (HUD) website has extensive information on how to buy a house.

The following two ratios might be helpful as well in determining how much you should spend on a house.

Housing Payments-to-Income Ratio. The **Federal Housing Authority (FHA)** recommends that homeowners spend less than 31% of their monthly income on housing expenses. This is commonly referred to as the **housing payments-to-income ratio** (also known as the **front-end mortgage qualification ratio**). To calculate this ratio, add together all of the monthly housing payments and then divide this amount by total gross monthly income (before taxes are taken out). This ratio should be less than 0.31 or 31% (although some mortgage lenders require the mortgage payment plus homeowner's insurance and property taxes to be less than 28% of household income).

Let's see how the FHA formula works in practice.

- Leah estimates that she will have the following monthly expenses if she were to buy a home: \$900 mortgage payment, \$150 property tax payment, \$100 hazard insurance premium, and a \$50 mortgage insurance premium.
- The housing payments number is the sum of principal, interest, tax, and insurance (both hazard and mortgage) and is commonly referred to as **PITI**.
- Leah's income is \$3,000 per month.

Leah's housing payments-to-income ratio is therefore 0.40, or 40%, calculated as follows:

$$\frac{\text{Monthly Housing Payments}}{\text{Monthly Gross Income}} = \frac{\$1{,}200}{\$3{,}000} = 0.40 > 0.31$$

Based on this ratio, purchasing this home would be a risky decision for Leah, and banks and other lenders would generally deny her mortgage application.

Total Fixed Payments-to-Income Ratio. Another common ratio recommended by the FHA is the **total fixed payments-to-income ratio**. This ratio, which should be less than 0.43 (or 43%), is the sum of the monthly housing payments plus all other monthly debt payments divided by total monthly income:

$$\frac{(\text{Monthly Housing Payments} + \text{Other Monthly Debt Payments})}{\text{Monthly Gross Income}} < 0.43$$

Some mortgage lenders apply an even more rigorous ratio called the **back-end mortgage qualification ratio** when someone applies for a conventional mortgage. The formula is the same, but the maximum in debt payments is lower, at 36%.

For example, assume Tula earns $5,000 a month and wants to buy a house that will have a $1,000 monthly mortgage. Also assume that the hazard insurance premium is $100 and property taxes are $300 per month. Based on the housing payment-to-income ratio, she's in good shape ($1,400 ÷ $5,000 = 28%). But If she has an additional $300 in debt payments, such as student loan payments, will she pass the back-end mortgage qualification rule? It turns out that Tula will still be okay. The total of her housing payments plus other monthly debt payments is $1,700. When divided by $5,000, she will be spending only 34% of her income on total debt payments.

Always remember that these ratios provide *general* guidance. You may have specific or unique fixed expenses that are not captured in these ratios. You may pass the general ratio tests; however, when your other unique obligations are considered, the loan may be unaffordable. The best way to know how much you can afford is to check your budget. You should also remember that if you can purchase sufficient housing with less debt, you will have more money left over to fund other goals.

Real Estate Agents and Mortgage Loan Officers

Once you know how much you can afford, you may want to use the help of a **real estate agent** to help you find a home.

- Real estate agents can represent the buyer, the seller, or both.
- Their experience can be quite helpful, especially when making an offer on a house.

You'll also need to work with a mortgage loan officer when you are looking for houses.

- A **mortgage loan officer** specializes in mortgages and can help you get preapproved for a loan so that when you find the house you want, you know you can afford it.
- To be **preapproved** for a loan simply means that the lender has verified your credit, income, and other important facts and has indicated how much you are able to borrow for the purchase of a house (see **Helpful Hint**).

HELPFUL HINT

Remember that there is no contract to purchase a house until the seller and buyer have agreed to every point within the legal agreement. Preapproval simply helps to speed up the process.

Concepts in Action

Angela and Frank are determining whether they can afford to purchase a house. Both Angela and Frank work, and their combined income is $6,000 per month. They have two children for whom they pay $900 per month for day care. Their total monthly mortgage payment, including hazard insurance, property taxes, and homeowners' association fees, is $1,800. Angela and Frank also have a car loan that has a monthly payment of $250, and student loans with a combined monthly payment of $100. Can Angela and Frank afford this mortgage?

Solution

Angela and Frank pass the payments-to-income ratio with a ratio of 0.30 ($1,800 ÷ $6,000). Angela and Frank also pass the total fixed payments-to-income ratio with a ratio of 0.36. If Angela and Frank were to also include their day care expenses as part of their total fixed payments, then their total fixed payments-to-income ratio would increase to 0.51. In this situation, Angela and Frank may feel a real financial pinch if they were to buy this house even though they can pass all of the ratio tests. Angela and Frank may want to wait until the kids are out of day care, their income increases, or they find a less expensive house.

Shopping for a Mortgage

When shopping for a mortgage, it is best to get at least three quotes from different lenders to make sure you are getting a fair rate. Some **mortgage loan officers** are captive agents, which means they only represent one lender and will only quote you rates from that lender. On the other hand, **mortgage brokers** do not represent any lender and can shop many different lenders to find the best mortgage rates. Be sure to request a good faith estimate from each of the lenders. A **good faith estimate (GFE)** details the following information:

- Loan type.
- Loan amount.

- Interest rate.
- Expected monthly principal and interest payment.
- **Closing costs**, which include all of the associated loan and purchase fees associated with buying a house, such as **appraisal fees** (to pay for a written document describing the value of the property), **title insurance** (insurance that protects either the lender or the borrower in case someone says they have a claim on the property after you've purchased it), loan origination fees and points (discussed below), governmental taxes, and some prepaid taxes and insurance (see **Helpful Hint**).

HELPFUL HINT

If you're borrowing money to purchase a home, your closing costs will also include fees charged by the lender and mortgage broker.

GFEs come on a standardized form provided by HUD. The standardized format allows borrowers to easily compare loan terms. Closing costs are often referred to as **settlement costs** because they are due when the sale takes place. Closing costs are typically several thousand dollars and usually average about 3% of the home's purchase price.

If you don't have a lot of money for a down payment and closing costs, you should consider an FHA loan. **FHA loans** are insured (for the lender) by the government so that lenders are more willing to make loans to borrowers that (1) have less money available for closing costs and down payments, and (2) may also have slightly lower credit scores than are necessary to qualify for conventional mortgages. However, in exchange for the greater flexibility in qualifying for a mortgage, FHA loans have a maximum amount that can be borrowed based on the local housing market.

Loan Origination Fees and Points

The single largest closing cost item is the loan origination fee. **Loan origination fees** are paid to the lender for providing a loan. Borrowers generally have two options regarding loan origination fees:

1. If borrowers want a lower interest rate on their mortgage, they sometimes have the option of paying a large upfront fee in exchange for a lower interest rate; this fee is referred to as **loan points**. A point is equal to 1% of the loan amount. So paying one point on $100,000 would be equivalent to writing a check for $1,000. The reduction in the mortgage interest rate associated with purchasing a point is based on the prevailing lending environment and the lender. If you are considering paying points on a mortgage, it pays to shop around for the largest reduction in the interest rate.
2. If borrowers accept a slightly higher mortgage interest rate, the lender may eliminate the loan origination fee and perhaps many of the closing costs. This makes it easier for cash-strapped buyers to qualify for a mortgage.

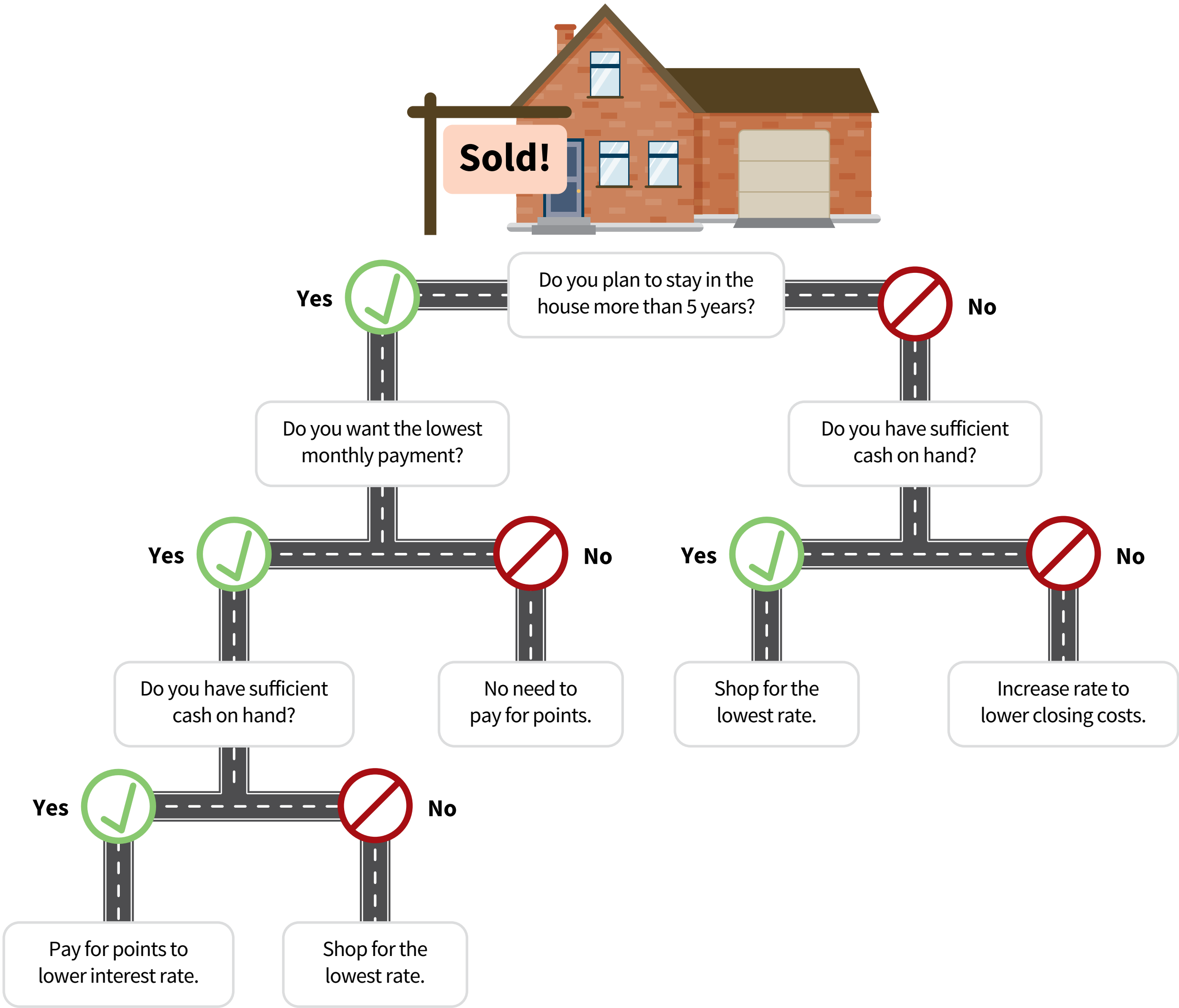
As you can see, there is a trade-off between closing costs and the interest rate on the loan. A slightly higher interest rate can significantly reduce closing costs; this is a good strategy if you will be in the home for only 5 to 7 years. On the other hand, by paying loan points and higher closing costs, borrowers can lock in a lower interest rate, which is a good thing if they plan to stay in the home long term. These trade-offs are illustrated in **Illustration 6.6.2**.

Minimizing Interest Costs

There are two main factors that contribute to how much interest you will pay on a mortgage loan: (1) the repayment period for the loan, and (2) the interest rate on the loan. The two most common mortgage loan options are a 15-year fixed rate and 30-year fixed rate. A 15-year mortgage will have a lower interest rate than a 30-year mortgage. But, because the loan is repaid more quickly, the payment amount for a 15-year mortgage is considerably more than a 30-year payment amount.

- If you were to borrow $150,000 at 5% for 30 years, your monthly payment on the mortgage would be $805.23, and you would make 360 payments over the mortgage term totaling $289,883.68 ($805.23 × 360). This means that you would repay the $150,000 borrowed plus $139,883.68 in interest.

ILLUSTRATION 6.6.2 How to Deal with Loan Origination Fees and Points



- If you were to borrow $150,000 for 15 years, the interest might be lower, let's say, 4% rather than 5%, but the monthly payment would increase to $1,109.53 because you would be repaying the loan in a shorter time period. You would therefore make 180 payments totaling $199,715.74 ($1,109.53 × 180).
- By choosing a 15-year mortgage rather than a 30-year mortgage, you save $90,167.94 in interest (see **Illustration 6.6.3**).

Another mortgage loan structure is an **adjustable rate mortgage (ARM)**. Just as the name implies, the interest rate changes periodically (usually every year, but the initial years of the ARM may have a fixed interest rate). Each time the interest rate changes, the loan payment will increase or decrease accordingly.

Closing the Deal

The last step in the home-buying process is closing the deal, commonly referred to as **settlement** or **closing**.

- This is the time when the property is formally sold and transferred from the seller to the buyer and when all closing costs must be paid.
- Because many forms must be reviewed and signed, this process is generally conducted by a title company or an attorney.

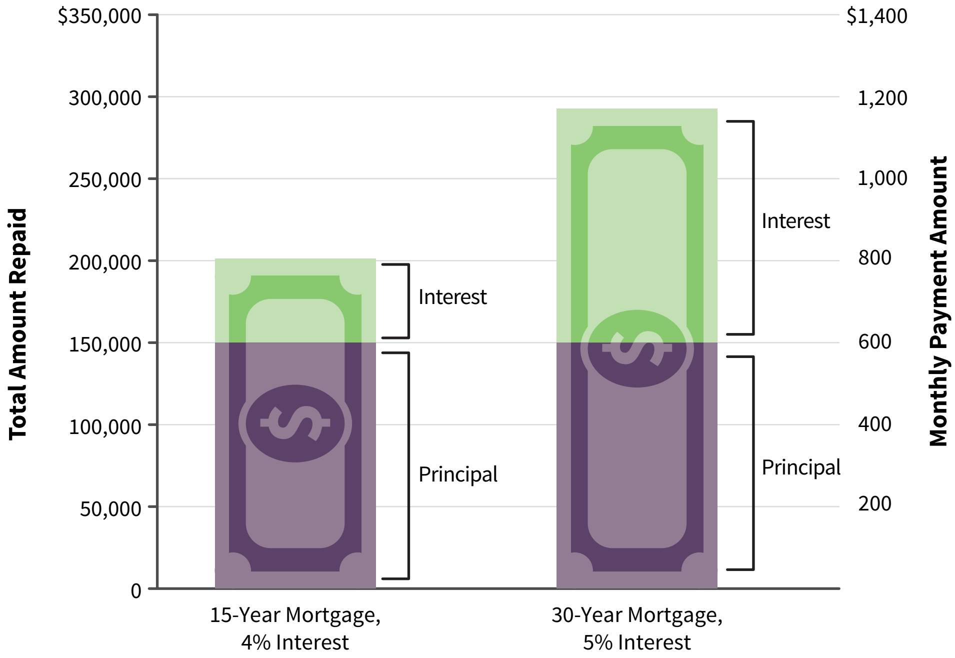


ILLUSTRATION 6.6.3

Difference in Interest Paid Between a 15-Year and 30-Year Mortgage

- Any down payment must be paid at this time, as well as final closing costs. A final listing of closing costs will be shown on the HUD 1 Settlement Statement, which details the flow of money between the buyer, seller, and lender. This form also details all of the actual closing costs (mortgage broker fees, lender fees, points, appraisal fee, title insurance, government fees and taxes, etc.) and provides a side-by-side comparison of these estimated expenses from the GFE and the actual cost.
- If the difference between the GFE and HUD 1 Settlement Statement is more than 10%, then the lender may have to reimburse some of those costs to the borrower.
- If the down payment is less then 20% of the purchase price, the borrower will generally need to pay for **primary mortgage insurance (PMI)**, which is an insurance policy that protects the lender (see **Helpful Hint**).

HELPFUL HINT

PMI increases the monthly mortgage payment and will be removed from the monthly payment once the mortgage has been paid down to 80% of the fair market value of the home.

Maximizing Housing Wealth

As a renter, you generally will make only a 1-year commitment to your landlord. This offers you some flexibility, especially if you are unsure about how long you might live in a specific area. As a homeowner, however, you can sell your house sometime in the future, thereby creating financial flexibility, which is a significant benefit.

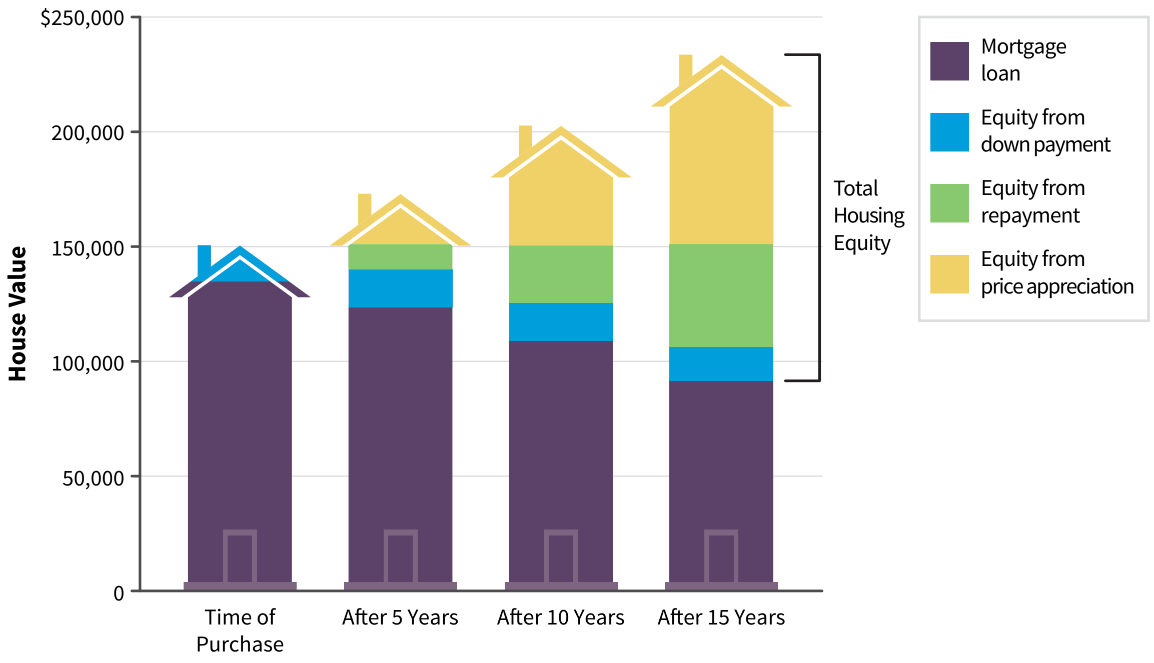
Being a homeowner allows you to build equity over time. **Housing equity** is the difference between what a house could sell for and the amount still owed on the mortgage. Housing equity is built in three ways:

1. **Making a large down payment.** This minimizes the initial loan.
2. **Paying down the mortgage loan.** Every time you make a monthly payment, a small portion of the payment goes toward paying down the principal on the mortgage loan.
3. **When housing prices in the area increase.** Although housing prices generally rise over long periods of time, housing prices can increase or decrease across time based on where the home is located and general market conditions.

Housing equity can be turned into cash when you sell your home. You can also take out a home equity loan, which uses your housing equity as collateral. Remember, even if your life circumstances change and you can no longer afford your monthly mortgage payment, you

can still sell the home. And as long as the market value is greater than the mortgage amount, you will receive the equity in your home. **Illustration 6.6.4** shows how equity can increase over time.

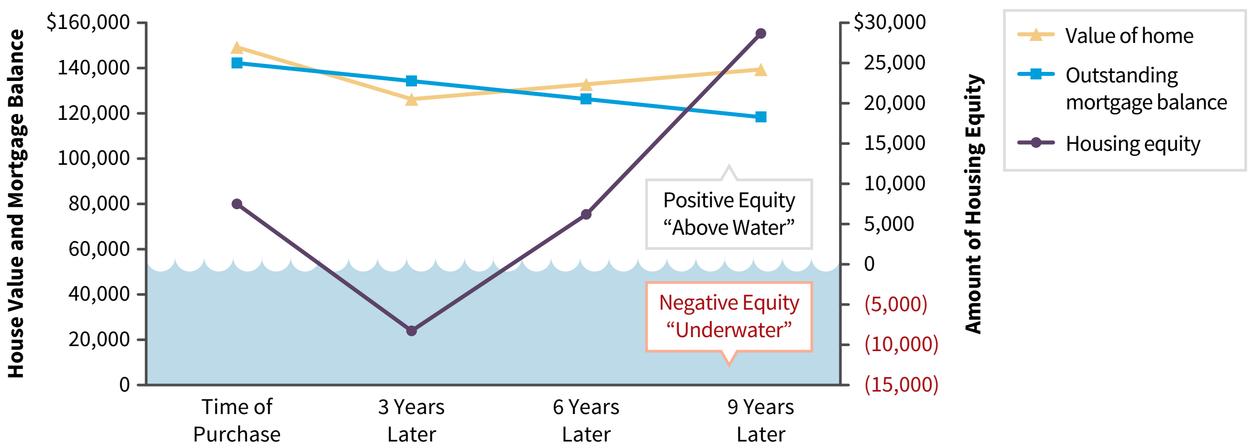
ILLUSTRATION 6.6.4 **Housing Equity over Time**



Being Underwater

In some situations, borrowers owe more than their home is worth. This is often referred to as "being underwater" or "upside down" on a mortgage. **Illustration 6.6.5** shows what it means to be underwater.

ILLUSTRATION 6.6.5 **Negative Home Equity**



Often, if homeowners are underwater on their mortgage and can no longer afford the mortgage payments, they can work with the lender to do what is called a short sale. A **short sale** allows the homeowner to sell the house for less than what is owed on the mortgage. This approach relieves the homeowner from paying the difference to the lender. Even though there may be tax complications with this strategy, it is often a more favorable solution than foreclosure.

Resale Value

Most homeowners buy and sell more than one house over their lifetimes. Because the typical homeowner buys and sells a home every 7 years, it's important to keep in mind what will make a house easier to sell in the future.

- Although unique houses may attract eccentric buyers, the number of buyers seeking uncommon houses is generally much smaller than the number of purchasers seeking standard homes.
- If more buyers are attracted to a house, then a higher selling price can usually be achieved within a relatively short time period. If fewer buyers are attracted to a house, then it may take longer to sell and at a lower selling price than a comparable house with a more traditional appearance.
- Transaction costs to sell a home can range between 3% and 7% of the home's value. So when getting ready to sell a home, keep in mind that you will not get to keep the entire selling price.

House Maintenance

One way to maximize resale value of a home involves proper maintenence of the property. Unlike renters, homeowners should expect to encounter costly expenses over time (see **Helpful Hint**). Keep in mind that some yearly maintenance costs may be very low, whereas in other years costs may be very high. Common expenses include the following:

> **HELPFUL HINT**
>
> **Maintenance costs average about 2% of the value of a home annually. For older homes, this amount will likely be higher.**

- Repairing or replacing major appliances (furnace, air conditioner, refrigerator, etc.).
- Maintaining and replacing flooring, a roof, and other structural features that wear out over time.
- Maintaining and replacing landscaping and other exterior features that add beauty to the house.

In some situations, such as condominiums and houses that are part of a planned development, landscaping and exterior maintenance is handled by a **homeowners' association**. However, in exchange for the homeowners' association taking on these responsibilities, members of the association must pay a monthly payment for these services. Fees can range from a few dollars per month to well over $1,000 per month.

This discussion highlights the need to really think through the benefits and obligations associated with homeownership.

- If you can afford the payments and you have a long-term time horizon, then buying can make sense.
- If your ownership time horizon is short or you think that the real estate market is going to go down, it may make more sense to rent.
- Remember some key tips to building housing wealth: make a large down payment (20%) to avoid mortgage-insurance premiums, use a mortgage broker to find the best mortgage rate rather than working with a single lender, and pay off your mortgage as quickly as possible to minimize interest expenses.
- Always remember that housing wealth is just one aspect of your total net worth. Too much focus on housing wealth may result in missed opportunities to create wealth in other areas, such as investing in your human capital.

End-of-Topic Assessment

Multiple-Choice Questions

1. **Calculate** Rimi currently earns $2,500 per month. She has the following monthly debt payment expenses: $75 for credit cards, $125 for student loans, and a $235 car payment. She is looking to buy a house. The monthly mortgage, including principal, insurance, and taxes, is $900. Does Rimi meet the FHA housing payments to income ratio guideline?

a. Yes, because her ratio is less than 31%.

b. No, because her ratio is greater than 31%.

c. Yes, because her ratio is less than 43%.

d. No, because her ratio is greater than 43%.

2. **Calculate** Rimi currently earns $2,500 per month. She has the following monthly debt payment expenses: $75 for credit cards, $125 for student loans, and a $235 car payment. She is looking to buy a house. The monthly mortgage, including principal, insurance, and taxes, is $900. Does Rimi pass the FHA total fixed payments-to-income ratio requirement?

a. Yes, because her ratio is less than 31%.

b. No, because her ratio is greater than 31%.

c. Yes, because her ratio is less than 43%.

d. No, because her ratio is greater than 43%.

3. What is *not* found in a good faith estimate?

a. Loan type.

b. Title insurance premium.

c. Yard maintenance fees.

d. Loan amount.

4. Which of the following loans requires a lower down payment?

a. Conventional 30-year mortgage.

b. FHA 30-year mortgage.

c. Conventional 15-year mortgage.

d. None of the answer choices are correct.

5. **Calculate** Ann is thinking about paying points to a lender to obtain a lower interest rate on her mortgage. The loan is in the amount of $350,000. If she pays 2 points, she can reduce the interest rate from 5.25% to 4.50%. How much in loan points must Ann pay to get this deal?

a. $1,000.

b. $1,750.

c. $3,500.

d. $7,000.

6. **Calculate** What is the *approximate* monthly mortgage payment if the loan amount is $300,000, the annual interest rate is 3%, and the loan duration is 15 years? (*Hint:* You may need to review time value of money calculations).

a. $1,265.

b. $1,322.

c. $2,072.

d. $2,094.

7. Insurance that protects the lender in the event that the borrower does not repay the mortgage is called:

a. mortgage insurance.

b. homeowner's insurance.

c. settlement insurance.

d. good faith insurance.

8. **Calculate** Emily owns a house with a fair market value of $175,000. When she purchased the home she paid $210,000, but that was several years ago. She currently owes $193,000. How much equity has Emily built since she first purchased the house?

a. –$7,000.

b. –$18,000.

c. $7,000.

d. $35,000.

9. What options are available for someone who is underwater with her or his home and can no longer make the monthly mortgage payment?

a. Foreclosure.

b. Short sale.

c. Home equity loan.

d. Both a foreclosure and a short sale.

10. Unlike renters, homeowners are required to pay for what common expenses?

a. Replacing appliances.

b. Fixing broken windows.

c. Painting every few years.

d. All of the answer choices are correct.

Adventures in Personal Finance

Short Answer

1. Match the following terms in the left column with the correct definitions shown in the right column.

a. Homeowner's insurance.
b. Mortgage loan.
c. Home equity.
d. Mortgage insurance.
e. Settlement or closing.
f. Loan origination fee.
g. Good faith estimate.
h. Closing costs.

1. A standardized form on which the loan characteristics, estimated payment, and estimated closing costs are shown.

2. Insurance that reimburses the homeowner in the event that the home is destroyed by fire.

3. Often the single-largest closing cost, it compensates the lender for providing the mortgage loan.

4. The total fees associated with the purchase of a house and receiving a loan.

5. A loan secured by real property.

6. The difference between what a house could sell for and the remaining amount owed on the mortgage.

7. The process through which the property is legally transferred from the seller to the buyer.

8. Insurance that protects the lender in the event that the borrower does not repay the mortgage.

2. Answer each of the following questions regarding the trade-off between mortgage interest rates and closing costs.

- **a.** Under what circumstances would it be financially beneficial to get a mortgage loan with a slightly higher interest rate to significantly reduce the closing costs?
- **b.** Under what circumstances would it be financially beneficial to pay higher closing costs to get a mortgage loan with a slightly lower interest rate?

3. When you begin looking for a home to purchase, you should also shop for a loan. In addition to obtaining a traditional loan from a bank or mortgage lender, it may also be possible to obtain an FHA mortgage loan. FHA loans generally require a lower down payment. If you could qualify for either an FHA or conventional mortgage and you had a sufficiently high down payment already saved, which loan would allow you to purchase a more expensive home?

4. It is important to have sufficient cash savings before beginning the home search process. Describe some of the most significant common fees and costs associated with purchasing a home.

5. Discuss three different ways that housing equity is built.

6. Housing prices can fluctuate over time as housing market and economic conditions vary. Given this, how can you avoid having negative housing equity when housing prices fluctuate?

Explore

1. How much do houses in your community cost? Search real estate websites to see the selling prices for houses available in your community.

2. According to the U.S. Department of Housing and Urban Development (HUD), about 70% of homeowners in the United States are white. Homeownership among African-Americans and Hispanics is less than 50%. Visit the HUD website as well as other Internet sites to obtain more information describing why there may be a racial/ethnic difference in homeownership and why it is important that everyone have access to homeownership. As part of your research, summarize some of the interventions that have been developed to help first-time, low-income, and minority buyers gain access to the housing market.

Expanded Learning Activity

Calculate Joe wants to borrow $200,000. If he can get a 30-year loan at a 5% rate, how much will his *monthly* principal and interest payment be? Here is the time value of money formula for calculating a monthly mortgage payment:

$$\text{Monthly Payment} = P\left[\frac{(i(1+i)^n)}{((1+i)^n - 1)}\right]$$

where P = the amount borrowed (mortgage), i = interest rate, and n = number of payments.

To answer this question, you first need to convert the years to months and the yearly rate of interest to monthly:

- Number of periods: 30 years × 12 months = 360
- Monthly interest rate: 5% ÷ 12 = 0.4167% or 0.004167

Now, plug these figures into the formula as follows:

$$\$1{,}073.69 = \$200{,}000\left[\frac{(.004167(1+.004167)^{360})}{((1+.004167)^{360} - 1)}\right]$$

or

$$\$1{,}073.69 = \$200{,}000\left[\frac{(.004167(4.4683)}{(4.4683 - 1)}\right]$$

Help Joe figure out whether he passes the FHA housing payment-to-income ratio if his monthly income is $6,000, the monthly hazard insurance premium is $200, and monthly property taxes are $350. Use an online mortgage affordability calculator to verify your answer.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

6.1 Identify high-cost consumer loans and how to avoid them. Borrowing from alternative lenders, including pawn shops, payday lenders, and title loan lenders, requires collateral and includes significant drawbacks, such as high fees and lack of consumer protection. To ensure that you can avoid these predatory lenders, you need to build an emergency savings fund and maintain a clean credit report and strong credit score.

6.2 Explain the characteristics of a personal loan. Secured or unsecured loans can be obtained from a variety of sources. In addition, the amount of interest paid on a loan depends on the length of the loan. Essentially, the shorter the loan duration, the less interest paid; however, shorter loans may involve a higher monthly payment. An effective way to ensure that you can obtain a personal loan is to have a checking account, or some other formal banking relationship, and a reasonably high credit score.

6.3 Discuss the sources of financial aid and loans available to students. The Free Application for Federal Student Aid (FAFSA) application is used by colleges and universities when distributing need-based financial aid. Loans available to students include direct subsidized, direct unsubsidized, and direct PLUS loans; the Public Service Loan Forgiveness (PSLF) Program and other repayment plans are available to those with federal loans. For example, Pay as You Earn repayment plans can be used to manage student loan debt payments. It is best to avoid student loan debt, but if needed, borrowers should focus first on obtaining federal subsidized and unsubsidized loans given the multiple repayment plans available for these types of loans.

6.4 Develop a vehicle-acquisition strategy that uses an auto loan or lease. Before developing a vehicle-acquisition strategy, you should first understand the role of depreciation when determining the value of a use asset, such as a vehicle. While purchasing a car can help increase your opportunity to earn higher wages (your human capital), the car itself will depreciate in value over time, which means that vehicles are not an investment asset.

6.5 Know the basics of renting a home or an apartment. There are a number of things you should consider when selecting a place to rent, but a primary concern should be safety. Other factors include neighborhood features, access to work and recreation, and good schools. The characteristics of a lease include many options. Additional costs to consider when renting include security deposits and renter's insurance.

6.6 Describe the necessary considerations and benefits associated with purchasing and owning a home. Homeownership is a worthwhile goal. Homeownership can help build wealth over time; however, if not managed wisely, homeownership can be expensive and hinder the achievement of financial goals. Additionally, you need to know how to calculate the affordability of homeownership using standard mortgage guidelines. Remember, purchasing a home usually makes financial sense if you plan to live in the home for at least 5 years. If your time frame is shorter, renting may be a better alternative.

Continuing Case: Tarek's Financial Journey

Tarek has been watching money-guru YouTube® videos. Some of these gurus have been forecasting a major decline in the economy, which might lead to job insecurity. As a result, they're recommending that people should avoid debt at all costs and instead use cash to buy what they need.

Tarek would like to follow this approach when managing his own financial affairs, but there are a few problems. First, Tarek's car recently broke down, and the repairs will cost much more than the car is worth. He now needs a new vehicle. Unfortunately, Tarek's emergency fund is not fully established, and he doesn't have the cash to buy anything that would be both safe and reliable. He has another problem: when he was in college, he had a credit card but sometimes made late payments. Although he eventually paid off the credit card and cancelled it, his credit score is still on the low end of the FICO® score range.

Instructions

Tarek has come back to you with a few more personal finance questions. Help Tarek work through his questions and issues by providing advice that will help set him on the right financial path.

a. When thinking about purchasing a car, Tarek came up with the following estimates. First, he's confident that he can dedicate $410 per month for the purchase and maintenance of a car. Tarek also estimated the following monthly expenses: gas $50, insurance $80, maintenance $40, and repairs $15 (assuming he buys a new car). Based on these estimates, how much can Tarek spend each month on a loan payment, assuming a 4-year, 3% APR loan?

b. Assuming that Tarek can obtain a car loan, how will making timely payments influence his credit score? What other things can Tarek do to reestablish his credit score?

c. Not surprisingly, Tarek still has several thousand dollars in student loans outstanding. When he graduated from college, he had federal loans of $45,000, with an average APR of 6.80%. Six months after graduation, he started making payments using the standard repayment plan. How much is his monthly payment? If all his student loans were subsidized and if he wants to minimize his monthly payment to increase his financial flexibility, what repayment schedule would be best for Tarek? What will be his new maximum monthly payment if his federally calculated discretionary income is $4,500 per month?

d. Because housing prices in his area have recently dropped, Tarek is insistent that he should buy a home. Given his projected monthly income of $4,500 and other monthly debt repayment expenses of $225 for a car and estimated student loan payments of $500 per month (use this number rather than the number calculated for part (c)), what is the maximum monthly principal and interest payment he can afford if insurance is $80 per month and property taxes on the home are an additional $200 per month (use HUD guidelines)? What size loan can Tarek afford based on your answer, assuming that he can obtain a 5.50% loan for 30 years?

e. Now that you've helped Tarek, do you think that he should follow the money gurus' advice and avoid debt at all costs, or should he incorporate credit and debt into his financial management strategy? Why or why not? What other factors might be considered when he makes his final decision?

Calculating the Cost of Life's Financial Journey

Dan and Marlo are in the market for a new vehicle. Marlo is looking for a reliable car that's relatively inexpensive. Dan is interested in upgrading the family's image. He and Marlo have always driven old used cars, and he thinks it's time that they buy a car that is stylish and something that sends a message to his friends and neighbors that they "have made it." They have narrowed their list down to five cars. While Dan has his preferences, he has agreed to abide by your estimates when selecting their next vehicle.

Instructions

Help Dan and Marlo calculate the total monthly cost of the cars they are looking at by completing the table and then answering the following questions.

a. Which vehicle should they purchase if they are interested only in the lowest monthly loan payment?

b. What should they choose if they are interested in buying something that has the lowest total monthly cost?

c. If they are interested in a vehicle with the lowest overall cost of ownership, which one should they choose?

	Car 1	**Car 2**	**Car 3**	**Car 4**	**Car 5**
Type	4-Door Sedan	2-Door Luxury Coupe	4-Door Luxury Sedan	SUV	Luxury SUV
Cost	$29,000	$43,000	$45,000	$34,000	$42,000
Loan interest rate	1.90%	3.40%	0.00%	1.90%	3.50%
Length of loan (years)	3	5	6	5	7
Monthly insurance	$125	$170	$175	$145	$155
Monthly gas	$95	$150	$165	$190	$210
Monthly payment					
Total monthly expense					
Total of all payments					
Overall cost of ownership					

Planning for the Future

Tucco Lamar, age 30, and Lini Lamar, age 31, have been married for six years. They got married right after Tucco graduated from college. They have come to you for help in planning their financial future. They're both employed in highly stable positions. Tucco works in the marketing department of a large corporation. Lini works for a nonprofit service organization.

Instructions

Use the following income, expense, asset, and liability information to answer Tucco and Lini's questions.

Income and Expense Statement of the Lamar Household

	Tucco	**Lini**	**Joint**	**Total**
Income	$44,000	$49,000		$93,000
Interest			$ 23	23
Income				$93,023
Taxes	$ 9,966	$11,099		$21,065
Rent			32,550	$32,550
Auto insurance			2,800	$ 2,800
Food and eating out			5,000	5,000
Car payments	4,634	4,804		9,438
Student loans	4,869	3,060		7,929
Hobbies		1,200		1,200
Sports	900			900
Retirement savings	1,760	2,940		4,700
Vacations			4,900	4,900
Credit cards			2,400	2,400
Expenses				$92,881

Net Worth Position for the Lamar Household

	Tucco	Lini	Joint	Total
Checking			$ 250	$ 250
Savings			2,300	2,300
Car 1	$13,000			13,000
Car 2		$ 9,000		9,000
Furnishings			3,500	3,500
Clothes	2,400	3,300		5,700
Other household			5,000	5,000
Sports equipment	2,300			2,300
Hobby supplies		1,000		1,000
401(k)	23,000			23,000
403(b)		42,000		42,000
Total Assets				$107,050
Credit cards			$13,000	$ 13,000
Student loans	$ 7,400	$18,000		25,400
Car loans	3,000	12,000		15,000
Total Liabilities				$ 53,400

a. Lini is particularly interested in buying a home. Tucco, on the other hand, likes the flexibility of renting. Given their current financial situation, does it make sense for them to continue renting in their current location? Use the HUD rental expenses guideline to guide your answer.

b. Lini has been investigating the housing market. She found a wonderful new house priced at $205,000. Given their credit score, she is confident that she and Tucco can qualify for a 30-year, fixed-rate 5.20% mortgage. If they were to purchase this home, how much of a down payment will they need to have in order to avoid PMI? How much will they need to put down if they use a 5% down payment?

c. Given their current financial situation, do Lini and Tucco have sufficient assets to make either a 5% or 20% down payment? If they don't have enough, what can they do?

d. Lini anticipates receiving a gift from her parents to help offset the expense of a down payment. If a homeowner's insurance policy will cost $1,400 per year and property taxes will be $4,300 per year, what will be their *monthly* PITI on a loan with a 20% down payment? What will be the *monthly* PITI with a 5% down payment, assuming private mortgage insurance costs $900 per year?

e. Do Lini and Tucco meet HUD's housing payments to income ratio? Do they meet HUD's total fixed payments to income ratio for either the 20% down payment scenario or the 5% down payment scenario?

f. Based on your estimates, do you agree or disagree with Lini that they should purchase a home, assuming they have at least a 5% down payment, at this time?

g. Should Tucco and Lini request a nonstandard student loan repayment plan? Why or why not?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER **7**

The Foundation of Savings

JGI/Jamie Grill/Blend Images/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

7.1 Describe the relationship between investment risk and return.

7.2 Explain why an emergency fund is critical for financial well-being.

7.3 Identify the use and benefits of savings accounts, money market savings accounts, and certificates of deposit.

7.4 Explain how a Roth IRA provides savings and tax benefits.

7.5 Describe the benefits and limitations of U.S. savings bonds.

7.6 Discuss the different types of custodial and beneficiary accounts and their appropriate uses.

7.7 Recognize financial frauds and the strategies to protect against them.

During the Great Depression (1929–1939), there was a general sense that banks were unsafe. As a result, many Americans hid their cash at home. One commentator at the time quipped, "I am not so much concerned with the return *on* capital as I am with the return *of* capital."[1] In other words, people were searching for safe places to put their savings. People wanted safety, guarantees, and a modest rate of return, or interest rate, on their deposits. Although the economic landscape of today is different, the Great Recession and financial crisis of 2008 remind us that the desire to earn good returns with acceptable risk continues to be just as relevant today.

In this chapter, you will learn about places to hold your money, ways to protect yourself financially as you begin your lifetime financial journey, and methods you can use to grow your money over time. This discussion will also address ways to create an emergency savings fund using a Roth IRA and introduce custodial accounts for use when saving and investing for children.

What's in Your Account?

Before beginning the chapter work, let's start by reviewing some key concepts. As you have already learned, the average American tends to live day to day financially. In fact, many Americans are unable to come up with $500 if needed in an emergency. Few households are able to face a

[1] This quote is commonly attributed to Will Rogers.

financial emergency with confidence. (Your financial-emergency preparedness is also affected by having appropriate insurance coverage, which will be addressed in another chapter.) As a student, no one expects you to have the financial resources of a millionaire, but it is reasonable to hope that you and other students have established a savings habit. The following questions can be used to help you pinpoint your savings approach.

How Do You Save?

	Score
1. Do you have a savings account? If yes, give yourself 3 points.	______
2. In the past 3 years, have you borrowed money from a pawn shop, title loan company, or payday loan firm? If yes, subtract 3 points.	______
3. In the past 3 years, did you "purchase" something at a rent-to-own store? If yes, subtract 3 points.	______
4. Do you know the interest rate on U.S. savings bonds? If yes, give yourself 3 points.	______
5. Do you currently own any investments, such as stocks or mutual funds? If yes, give yourself 3 points.	______
6. If you sold everything you own, turned it into cash, and paid all your debts, how many months could you live on the proceeds? Use the number of months as your score.	______
7. Have you purchased a lottery ticket in the past year? If yes, subtract 3 points.	______
8. If you suddenly received $100, would you save at least $75 and have fun with the remainder? If yes, give yourself 3 points.	______
9. Do you currently have a Roth IRA? If yes, give yourself 3 points.	______
10. What percentage of your current paycheck do you save? Use the answer as your score.	______
Total:	______

How did you do?

- If your score is negative, you will want to start applying this chapter's content to your life right away. A negative score means that you may not be as focused on saving as you should be.
- If your score is zero (0), this means you are treading water, so to speak, when it comes to establishing good savings habits. After reading the material in this chapter, you'll be on your way to being a saver.
- If your score is positive, you have already established a pattern of saving. This means you are focused on the future and thinking about ways to improve your financial situation.

Regardless of your current savings approach, the material in this chapter will be useful in giving you strategies to strengthen your financial situation.

Risks, Returns, and the Investment Pyramid

LO 7.1 Describe the relationship between investment risk and return.

In life, you almost always have to take a risk to achieve your goals. Whether that involves asking someone on a first date, trying out for a sports team, or applying for a dream job, a risk is required before the desired result is possible. The concepts of risk and return also apply to your financial goals. That is, how much **risk** you take when saving and investing will determine how much wealth (your **return**) you will accumulate in the future. As you already know, the amount of your wealth directly affects the likelihood that you will be able to reach your financial goals over the course of your lifetime financial journey.

Risk Defined

In the world of finance, there is one certainty: *you must take more risk to earn a higher return*. Remember the Rule of 72? The **Rule of 72** is a shortcut that tells you how long it takes to double your money when you have a fixed rate of return. For example:

- It takes about 72 years at a 1% rate of return to double invested money.
- It only takes about 12 years at a 6% rate of return to double invested money.

In this example, **risk** refers to the possibility of losing money. In ordor to earn 6%, you will need to take more risk. The **U.S. Securities and Exchange Commission (SEC)** defines risk as the "degree of uncertainty and/or potential financial loss inherent in an investment decision." Your **financial risk tolerance**, then, is the extent of your willingness to engage in financial behavior that has the possibility of a loss.

Types of Risk

Risk comes in many forms and often involves volatility. You can think about **volatility** as the value of an asset fluctuating up and down, or the variability of returns over time. An asset that can lose value is considered to be riskier than an asset that cannot go down in value. However, there is more to understand about risk than volatility and the potential for loss. Let's look at a few types of risk that can really throw you off course during your financial journey:

- **Inflation risk** occurs when prices increase over time. This is often overlooked when making financial plans.
- **Business risk** is the possibility that a company in which you invest will be forced to close.
- **Interest rate risk** is the chance that general interest rates will increase, which will reduce the value of most investments (see **Helpful Hint**).
- **Liquidity risk** occurs when you cannot sell something you own because of a weak market, meaning others aren't willing to buy what you are selling.

HELPFUL HINT

When interest rates increase, the value of most investments will decrease.

Inflation Risk

Let's look at inflation risk in more detail. You should care about inflation because *inflation reduces the value of what a dollar can buy in the future*. **Illustration 7.1.1** provides an example of how inflation works in practice.

- The illustration highlights how the average price of several commonly purchased items increased from 1980 to 2015.
- Recall that by using time value of money calculations, you can estimate that the average annual increase in prices from year to year was approximately 3.06% during this time period. This general increase in prices is called **inflation**.

ILLUSTRATION 7.1.1 **Specific and Average Inflation Rates**

Item	1980 Cost	2015 Actual Cost	2015 Projected Cost Based on Average Annual Inflation of 3.06%	Actual Item Annual Inflation Rate	Was 2015 Price Above or Below What Was Expected?
Gasoline (1 gallon)	$ 1.24	$ 2.44	$ 3.58	1.95%	Below
Bread, white (1 pound)	$ 0.51	$ 1.44	$ 1.46	3.01%	About the same
Ground beef (1 pound)	$ 1.83	$ 4.25	$ 5.26	2.44%	Below
Eggs (1 dozen)	$ 0.84	$ 2.47	$ 2.42	3.13%	About the same
Apples (1 pound)	$ 0.63	$ 1.36	$ 1.81	2.22%	Below
Oranges (1 pound)	$ 0.36	$ 1.30	$ 1.05	3.74%	Above
Tuition, public 4-year school	$808.00	$9,410.00	$2,320.00	7.27%	Above

Source: U.S. Bureau of Labor Statistics, Consumer Price Index (CPI) databases.

HELPFUL HINT

Inflation does not always occur uniformly. As Illustration 7.1.1 shows, the price of some items increased faster or slower than general inflation during that time period.

The amounts shown in Illustration 7.1.1 represent an average annual rate of inflation equal to 3.06% annually. It is worth noting that during the 35 years represented in Illustration 7.1.1, wages and salaries actually went up faster (3.93%) than general inflation. However, some big-ticket items, such as tuition, grew much faster than inflation and wages during this time period (see **Helpful Hint**). Stated another way, increases in wages did not keep pace with the rising cost of going to school.

This last point is especially important. You will not know beforehand what will go up more or less than inflation. For example, what costs a college student $9,410 in tuition and fees in 2015–2016 could have been purchased 30 years ago for about $808. Rather than matching the average inflation rate during that time—3.06% annually—tuition inflation was closer to 7.27%!

Inflation can also reduce your investment returns.

- Let's say that you earn 1% in a safe and secure bank account. The 1% rate of return is called your **nominal return**. Interest rates and rates of return are stated as nominal returns.
- If prices for food, gas, housing, and other items go up by 3% per year, then you are, in reality, losing approximately 2% yearly of your money's purchasing power.
- Your inflation-adjusted return is called your **real rate of return**. Real rates of return are rarely stated; you need to calculate them.

You can use the following formula to estimate your real rate of return:

$$\textbf{Real Rate of Return} = \left[\frac{\textbf{(1 + Nominal Return)}}{\textbf{(1 + Inflation Rate)}}\right] - \textbf{1}$$

Consider Joan, who makes a 12% rate of return on an investment. If inflation is 3%, her real rate of return, as shown, is only is 8.74%. (When using the formula, be sure to convert return and inflation figures into their equivalent decimal representations.)

$$\frac{(1 + 0.12)}{(1 + 0.03)} - 1 = \frac{1.12}{1.03} - 1 = 8.74\%$$

Higher inflation reduces nominal returns. When saving and investing, it is necessary to consider the broader economy and not only the nominal return. The Attorney General of New York summarized the relationship between risk and return with the following two rules that you should use when you do any financial planning.

1. Risk and return go hand in hand. Higher returns mean greater risk, whereas lower returns promise greater safety.
2. No matter how you choose to invest your money, there will always be a degree of risk involved.

Assessing Risk

The concept of risk has come up several times throughout this text. The reason is that uncertainty and perceptions of risk shape nearly every financial decision made during your lifetime financial journey. As a reminder, risk can be described two ways:

1. **Subjective risk** is your perception of the riskiness associated with a behavior or decision. Subjective risk is based on your personally developed probabilities of potential losses based on expectations, fears, worries, and other factors. Subjective risk varies from one person to another.
2. **Objective risk** is the ranking of risk using actual statistics. Objective risk is something that can be measured using probabilities.

For example, suppose you were asked to rank the following from the most to the least risky over your lifetime: dying from (a) a spider bite, (b) poisoning, and (c) a plane crash. Many people would subjectively rank those options as spider bites first, crashing second, and poisoning third. However, the objective risks are quite different. Based on data from the **National Safety Council**, the least likely event is dying from a spider bite (the odds are only 1 in 423,461). The most likely involves poisoning (1 in 161). Dying in a plane crash falls in-between (1 in 6,460).

This discussion boils down to a few key takeaways:

- Every decision you make entails some degree of risk. You might lose (or gain) money because an asset goes down (or up) in value, or you might lose money because of inflation or some other factor. But *you must be willing to take some risk to earn higher returns.*
- How you perceive risk—your subjective evaluation—is sometimes incorrect. Although banks are perceived as safe places to deposit your money, banks provide very little protection against inflation risk. As a result, *you must balance your subjective evaluations against the facts*.

Has the discussion so far increased your financial anxiety? Words like *risk*, *loss*, and *volatility* tend to be stressors for most people. But here's the good news about risk. If risky financial decisions can result in losses, these same decisions can also lead to higher returns (i.e., the interest, dividends, and capital gains that are generated on your savings and investments). By taking calculated risks (knowing the objective probabilities), you can increase your returns, and minimize your losses, over time.

Concepts in Action

You are surrounded by risk every day of the year. Nearly all of these risks can be life-threatening. Four ways that a person can be fatally harmed are listed. Based on your perceptions of these risks—your subjective evaluation—rank these four items from most to least likely.

a. Contact with hornets, wasps, or bees.

b. Being hit by a car while walking.

c. A fall.

d. A bicycle accident.

Solution

1. c. Fall: 1 in 133.

2. b. Being hit by a car while walking: 1 in 647.

3. d. Bicycle accident: 1 in 4,337.

4. a. Contact with hornets, wasps, and bees: 1 in 64,706.

How closely did your perceptions match reality (most likely first, least likely last)? What does this tell you about your general ability to gauge risk subjectively?

Source: National Safety Council (http://www.nsc.org/learn/safety-knowledge/Pages/injury-facts-chart.aspx).

Saving and Investing: An Introduction

You should now be convinced that you need to be willing to take some risks to accumulate wealth. You have two basic choices when it comes time to decide how to put your money to work.

1. **Savings**: Money you put aside for short-term goals.
2. **Investments**: Assets that you purchase to reach long-term goals.

However, you won't necessarily want to pick one option over the other. In general, you will want to combine both options over your financial journey to accumulate wealth.

Combining Savings and Investments

For example, consider Lucy, who begins saving and investing at age 22 and lives to age 100. Each year, Lucy (1) saves $250 in a safe and secure account earning 3% interest and (2) invests $2,000 in a fund that generates an average 7% rate of return over time.

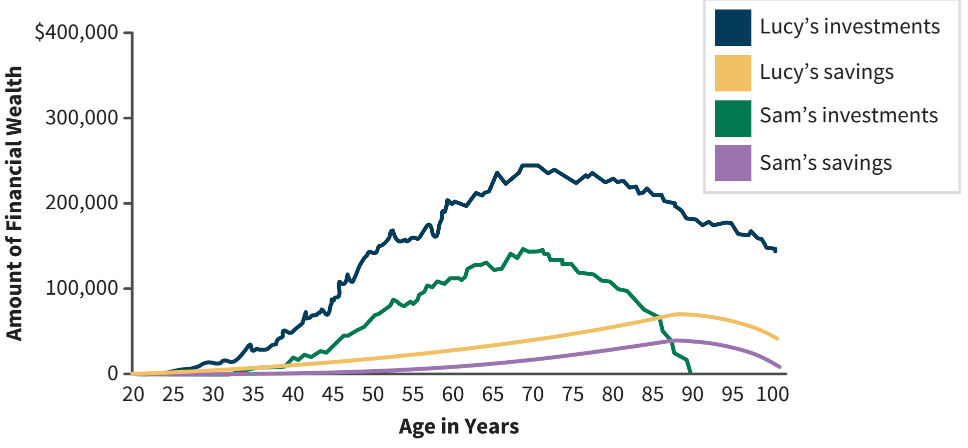
HELPFUL HINT

Note the peak in Illustration 7.1.2, which is when Lucy retires. If Lucy has saved and invested wisely, she will be able to draw down her accumulated wealth to supplement her income needs during retirement.

- As shown in **Illustration 7.1.2**, Lucy's savings and investments combine to create financial wealth, which is then used to fund her current financial objectives and future goals (see **Helpful Hint**).
- Note how Lucy's wealth increases slowly over time. The reason is that money held in savings accounts generally earns less—has a lower return—than investments. In contrast, her investment returns increase much more rapidly, especially over time as early returns experience the power of compound growth.

ILLUSTRATION 7.1.2

How Savings Plus Investments Equal Wealth over the Lifespan



Now consider Sam, who did not start saving and investing until age 30. However, at age 30, Sam experiences a large unexpected expense that required him to borrow $7,000. Essentially, this emergency slows Sam's overall ability to amass wealth over his life span (see Illustration 7.1.2). Sam may have a challenging time pulling sufficient money from savings and investments later in life to fund his retirement.

Sam's example also shows the need to establish and maintain an adequate and liquid emergency fund and appropriate insurance (discussed in a later chapter). Because maintaining liquidity is so central to the concept behind saving and investing, let's discuss it in more detail next.

Maintaining Liquidity

Liquidity refers to how quickly you can convert an asset into cash.

- Cash in your pocket is the most liquid asset, followed by assets held in banks and credit unions.
- Highly liquid assets will almost always generate lower returns.

Illustration 7.1.3 shows the relationship between liquidity and returns.

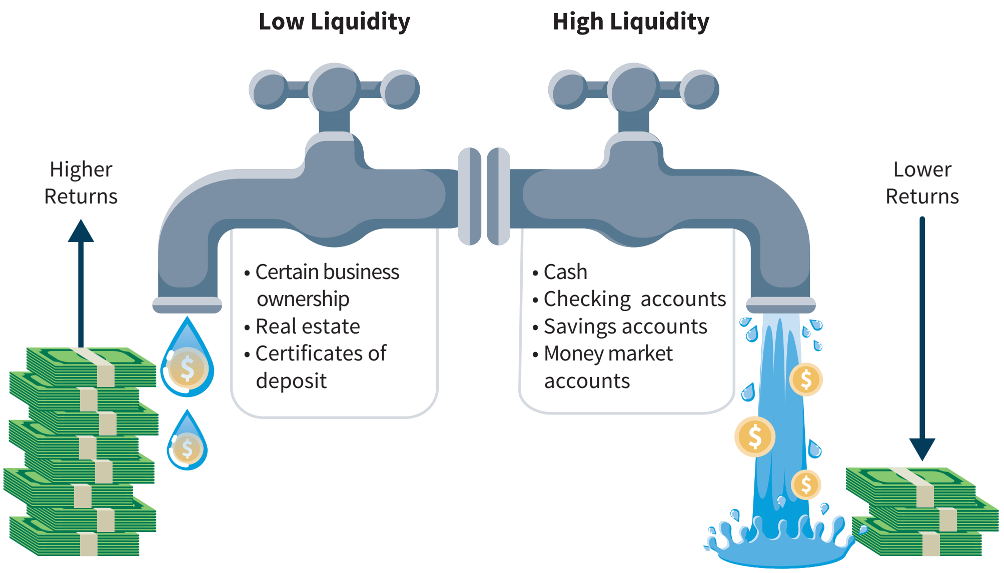


ILLUSTRATION 7.1.3

The Relationship Between Liquidity and Returns

There are times when you should be perfectly happy to accept higher liquidity and lower returns. For example, in Sam's case, he needed an emergency fund to quickly pay for his unexpected expenses.

- An **emergency fund** needs to be very liquid, that is, immediately accessible for use in case of unexpected expenses (such as a major car repair) or lost income (reduced number of hours worked).
- A basic guideline is that you should have between 3 and 6 months of living expenses saved for emergencies.
- For those who need high liquidity and convenience, holding money in a bank or credit union as an emergency fund or as general savings makes a lot of sense. These accounts are federally insured up to $250,000 per account holder through the **Federal Deposit Insurance Corporation (FDIC)** and the **National Credit Union Share Insurance Fund (NCUSIF)**.

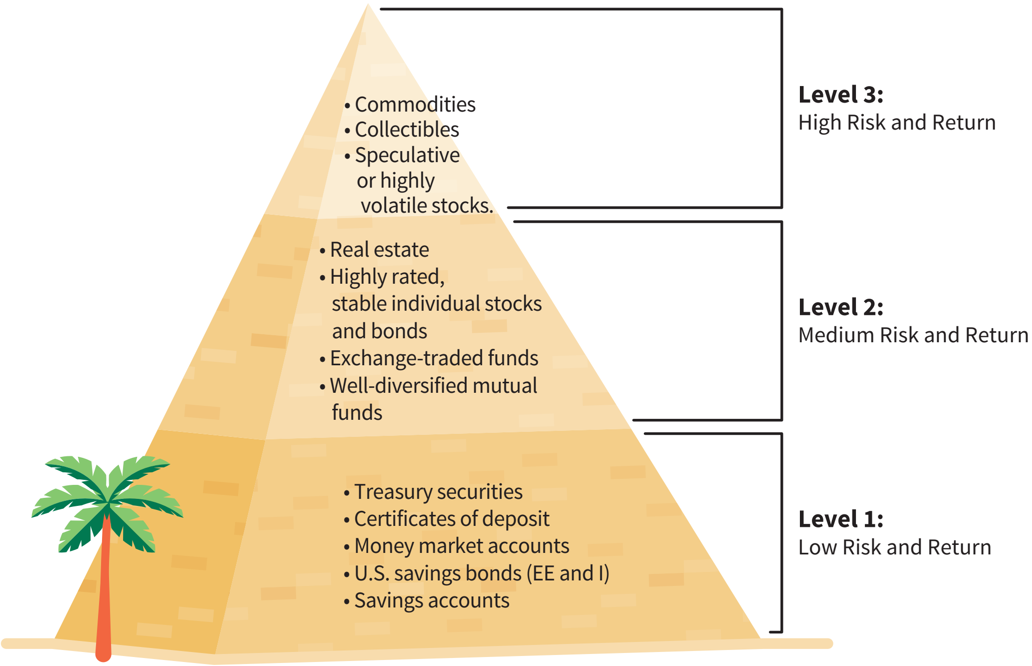
Throughout your financial journey, you need to balance risk, return, and liquidity when making saving and investment decisions. An investment pyramid can help you do this.

The Investment Pyramid

As any seasoned investor will tell you, a good investment is one that offers low risk and high returns. Unfortunately, it is difficult to find such an investment. Usually, you must make a tradeoff between risk and return. This concept of a tradeoff is summarized by the **investment pyramid** shown in **Illustration 7.1.4**. Think of the pyramids like those in Egypt, which require a solid foundation before the top layers can be added.

ILLUSTRATION 7.1.4

The Investment Pyramid



Level 1: Setting the Foundation

The base of the investment pyramid (Level 1) includes very liquid (safe and secure) and often insured assets.

HELPFUL HINT

Highly liquid assets are ideal to use to build your personal emergency fund.

- Examples include savings and checking accounts and certificates of deposit, typically offered at a bank or credit union (see **Helpful Hint**).
- Although current interest rates on savings accounts are low (1% to 2%), less than 20 years ago it was possible to earn more than 5% on federally insured deposits.

Level 2: Investments

Once you have an emergency fund in place, it is time to move up the pyramid's risk level by investing in assets that offer the potential to make a higher return over time.

- Examples of assets and products include mutual funds, stocks, and bonds.
- You want to have a longer time horizon before investing at this level of the pyramid.

Level 3: High-Risk Investments

Those who have a long time horizon, a well-funded emergency fund, the desire to accumulate more wealth, and a high-risk tolerance can think about making investments at the top of the pyramid.

- These assets and products represent investments that can generate very high returns (and very high losses).
- An example of an asset at that level of the pyramid is gold.
- The returns of high-risk investments can be very large over the long run, but because of war, political unrest, currency devaluation, and other risks, the value of these investments can also decrease substantially.

Illustration 7.1.5 provides a brief overview of the assets that make up the three levels of the investment pyramid. We will discuss each of these assets in more detail in the remainder of this text.

ILLUSTRATION 7.1.5 Liquidity and Risk Associated with Common Savings and Investment Products

Product	Description	Liquidity	Return	Pyramid Level	Is the Investment Insured?
Savings accounts	A product available through banks, credit unions, and other financial institutions.	High	Very low	1	Yes
Money market accounts	A bank and credit union product that generally pays a higher rate of interest than a savings account by limiting the number of monthly withdrawals.	High	Low	1	Yes
U.S. savings bonds	Low-cost, government-issued bonds designed to help individuals save and earn a competitive rate of return; may be purchased online.	Medium	Low	1	Yes
Certificates of deposit	A savings certificate sold in specific dollar amounts that must be held for a specific time (typically 1 year or more) but can be withdrawn early if some interest is foregone; typically issued by banks and credit unions.	Medium	Low	1	Yes
Treasury securities	Investments sold by the U.S government; T-bills are considered the most liquid and safest investments in the world; Treasury notes and bonds are longer-term securities issued by the government.	High	Low	1	No, but considered risk-free
Mutual funds	Professionally managed diversified portfolios that small investors can purchase to gain exposure to investments outside banks and credit unions.	Medium	Low to high depending on fund	2 to 3	No
Individual stocks	An investment that represents ownership in a company.	Medium	Low to high depending on the company	2 to 3	No
Exchange-traded funds	A hybrid investment fund that provides diversification like a mutual fund but trades like a stock.	Medium	Low to high depending on fund	2 to 3	No
Real estate	Commercial and rental property used by investors to generate returns (does not include your personal residence).	Low	Low to high depending on location	2 to 3	No
Collectibles	Coins, stamps, artwork, or anything else that can be bought and sold based on supply and demand.	Low	Low to high depending on market	3	No
Commodities	Food, wood, metals, and other inputs into production; generally used by investors as a hedge against inflation.	Low	Low to high depending on market	3	No

End-of-Topic Assessment

Multiple-Choice Questions

1. The variability of returns associated with investing is called:
   - **a.** liquidity risk.
   - **b.** objective risk.
   - **c.** volatility.
   - **d.** subjective risk.

2. **Calculate** Tula, age 33, is thinking about investing for retirement. She plans to retire when she turns age 62. She will need $1.2 million today's dollars in assets. If she can earn an average annual 7.75% rate of return, what will be her real rate of return?
   - **a.** 4.11%.
   - **b.** 4.25%.
   - **c.** 4.50 %.
   - **d.** 5.75%.

3. **Calculate** Tula, age 33, is thinking about investing for retirement. She plans to retire when she turns age 62. She will need $1.2 million in today's dollars in assets. If Tula has $300,000 currently saved and can earn an annual average real rate of return of 4%, will she meet her retirement goal?
   - **a.** Yes, because her money will double every 18 years, which will generate an excess savings amount.
   - **b.** No, because after inflation it will take her 72 years to get to $600,000 in assets.
   - **c.** Yes, because the risks associated with earning 4% are very low, she can invest without worrying.
   - **d.** No, because her money will double every 18 years, leaving her short of her goal.

4. When interest rates increase, which of the following outcomes is most likely?
   - **a.** The value of investments will increase.
   - **b.** The rate of return on a bank or credit union savings account will increase.
   - **c.** Holding cash in an emergency fund is more attractive.
   - **d.** The rate of return on a bank or credit union savings account will increase, and holding cash in an emergency fund is more attractive.

5. **Calculate** Leonard and Louise have been married for 14 years. They have combined annual incomes of $87,000. After taxes and other payroll deductions, they bring home $56,555 annually. If they save 10% of their take-home pay and use the rest for household living expenses, how much should they have in an emergency fund to meet the 3-month emergency fund requirement (round your answer)?
   - **a.** $12,700.
   - **b.** $14,100.
   - **c.** $16,900.
   - **d.** $18,100.

6. Which of the following statements is *true* when you invest in a federally insured bank account?
   - **a.** Given the federal insurance, you are taking no risk.
   - **b.** Although there is federal insurance, you are faced with liquidity risk.
   - **c.** Even though there is federal insurance in place, you still face inflation risk.
   - **d.** Given the federal insurance, you are taking significant business risk.

7. Generally speaking, you should build the base of your investment pyramid using low-risk assets. Which of the following assets would be most appropriate for building Level 1 of an investment pyramid?
   - **a.** U.S. savings bonds.
   - **b.** Certificates of deposit.
   - **c.** Treasury bills.
   - **d.** U.S. savings bonds, certificates of deposit, and treasury bills.

8. Which of the following should Taylor have to invest at Level 3 of her investment pyramid?
   - **a.** High risk tolerance.
   - **b.** Limited emergency fund savings.
   - **c.** Short- to intermediate-term time horizon.
   - **d.** A strong preference for government-insured products.

9. Which of the following assets would be an appropriate choice for Evan, who is building a portfolio at Level 2 of his investment pyramid?
   - **a.** Savings account.
   - **b.** Certificate of deposit.
   - **c.** Mutual fund.
   - **d.** Collectibles.

10. Which of the following has the highest level of liquidity?
    - **a.** Commodities.
    - **b.** Stocks.
    - **c.** Certificates of deposit.
    - **d.** Savings accounts.

Adventures in Personal Finance

Short Answer

1. **Calculate** Using the Rule of 72, determine how long it will take for Uma to double her money if she invests and earns the following returns: 2%, 5%, and 9%.
2. The **U.S. Nuclear Regulatory Commission** asks the following three questions to measure the magnitude of a potential risk: (1) what can go wrong, (2) how likely is it, and (3) what are the consequences? These questions can also be used to determine the riskiness associated with holding assets in a savings account for an emergency fund. Based on your answers, what would be a reasonable rate of return from such an account?
3. Explain why inflation risk can be just as dangerous as volatility for investors and savers.
4. **Calculate** Tip has annual expenses of $45,000. Calculate how much Tip should hold in his emergency fund.
5. Describe the association between risks and returns. Sketch the association between these two concepts.

Explore

1. Search the **Bureau of Labor Statistics** website for its inflation calculator. Using this tool, enter $1,000 for 1970, 1980, 1990, 2000, 2010, and this year. The output will tell you the amount needed today to purchase the equivalent of $1,000 in goods and services in the past. What do the estimates tell you about inflation over time? Given the outputs, how is someone who invests in only low-return assets doing financially over time?
2. **Writing** Review all the savings and investment assets that you own. You can find each asset and the accompanying value on your balance sheet. Match each asset to the appropriate level on the investment pyramid. In general, how are your assets currently allocated (low, medium, or high risk)? Write a brief reaction paper that discusses your allocation of assets as an indicator of your financial risk tolerance.

Expanded Learning Activity

Calculate **Writing** **Presentation** Conduct an Internet study of gasoline prices. Specifically, obtain information on the price per gallon of gasoline over time. The U.S. government provides statistics that might be helpful, such as at the **U.S. Department of Energy** website. Create a chart showing how the price of gasoline has fluctuated over time. Using the same data, determine how much prices have changed, as a percentage, over time. Looking at the data, does it look like gasoline prices have remained relatively stable, or have prices increased when accounting for inflation? In other words, on a real basis (accounting for inflation), how dramatically have gasoline prices changed over the years? Summarize the results of your study in a brief report. Be sure to share the results of your research with your classmates.

Building and Maintaining an Emergency Fund

LO 7.2 Explain why an emergency fund is critical for financial well-being.

Think back to your last vacation. You probably packed more than you needed, particularly clothing. Nearly everyone overpacks because they want to be prepared for the unexpected. However, although many individuals overpack for a vacation or other adventure, the opposite is true when it comes to preparing for their lifetime financial journey. Many households struggle to find ways to pay for unexpected expenses because they are unprepared.

In this topic, we discuss how an emergency fund can be used to make sure that you keep progressing toward your financial goals, even if an emergency strikes. Just like packing an extra shirt for a vacation, you should never leave home without an emergency fund!

Overview of Emergency Funds

Protecting Against Pure Risks

Lack of preparation for what are called *pure risks* can be a serious problem.

HELPFUL HINT

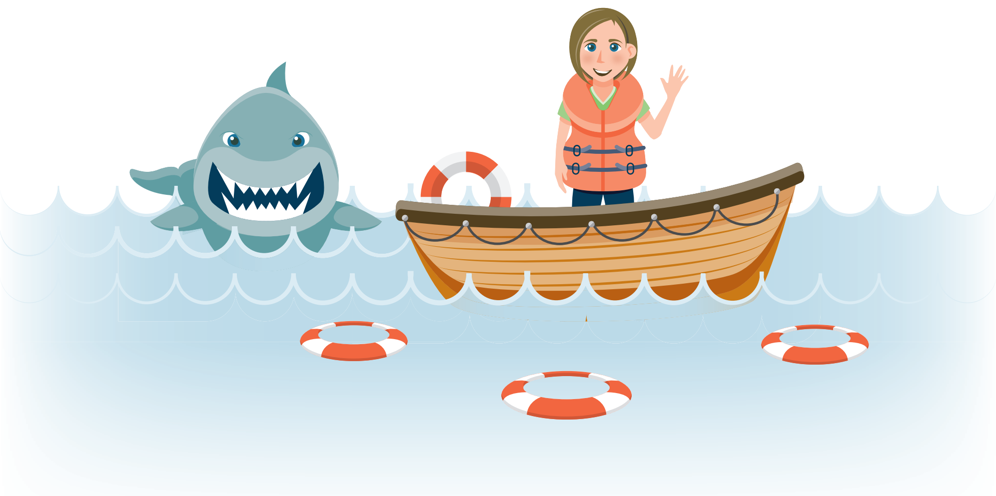
Unfortunately, only about one in four individuals have sufficient funds to handle pure risks.

- A **pure risk** is one that results only in an economic loss, such as needing to repair a car or replace a major appliance (see **Helpful Hint**).
- It is essential that you prepare for and anticipate these types of pure risks by establishing an emergency fund.
- An **emergency fund** holds money that is specifically set aside, in an easily accessible account, for the purpose of being available to address unexpected financial needs.

If you need more convincing about the value of an emergency fund, consider that no one ever plans to be in a car accident. Most people, if choosing between two similar cars, will prefer the one that has better safety features just in case of a wreck. The same logic holds true when thinking about your financial journey. Although no one expects to lose her or his job or need expensive medical care, these things occasionally happen (see **Illustration 7.2.1**). This is

ILLUSTRATION 7.2.1

A Pure Risk Situation



Even the most careful plans might not protect you against unexpected emergencies!

the reason why the best financial plans always include an emergency fund—to protect against the unexpected and ensure a safe arrival at the desired financial destination.

Determining the Amount of an Emergency Fund

Just like the number of safety features incorporated into an automobile, the appropriate amount of money that should be held in an emergency fund varies from one person to the next, based on his or her own life circumstances and tolerance for risk. For example, there are some people who are comfortable living with the possibility of a financial setback, meaning that they prefer spending all their income now rather than setting any aside for an emergency. Their tolerance for risk is likely higher than someone who wants to make sure that he or she can pay for a sizable emergency expense (see **Helpful Hint**).

HELPFUL HINT

It is generally recommended that 3 to 6 months of expenses be set aside in an emergency fund.

You can determine your **emergency fund ratio**, which indicates whether you have sufficient resources in case of an emergency, such as losing your job or becoming seriously ill. This ratio, shown in **Illustration 7.2.2**, is calculated using data from your **balance sheet** and your **income and expense statement** as follows:

1. Estimate your **monthly living expenses**, which is the minimum monthly dollar amount you would need to replace in case of an emergency by adding all your expenses and then subtracting nonessential expenses. Most fixed expenses—things like mortgage or rent, insurance, and loan payments—tend to fall into the emergency-need category. Other necessities would also be in this category, such as food, transportation, and utilities. Reviewing your personal budget will be the best way to determine this amount.
2. Determine how much you have in **monetary assets**, which includes cash, savings, and checking accounts.
3. Calculate your emergency fund ratio by dividing the amount of your monetary assets by your monthly living expenses.

$$\textbf{Emergency Fund Ratio} = \frac{\textbf{Monetary Assets}}{\textbf{Monthly Living Expenses}}$$

ILLUSTRATION 7.2.2

Emergency Fund Formula

The result from the calculation should be between 3 and 6 months. Those who have a very low risk tolerance will want to have 6 months of emergency savings in place.

For example, say that in the case of a major emergency you would need \$3,000 per month to live. You will need to have at least \$9,000 in your emergency fund to meet the benchmark (\$9,000 ÷ \$3,000 = 3). If you have a very low tolerance for risk, you would want to have 6 months' worth of emergency savings in place, which would be \$18,000 (\$18,000 ÷ \$3,000 = 6).

Another way to estimate the amount you should have in your emergency fund is to take the amount you think you will need on an annual basis in the case of an extreme emergency, divide by 12, and multiply by 3.

- For example, say Michelle thinks that she will need \$75,000 annually if she became disabled and is unable to work.
- Assume that she has a disability insurance policy with a 3-month elimination period (she will not receive benefits until 3 months have passed).
- This means that she will need \$6,250 per month (\$75,000 ÷ 12), which is equivalent to an emergency fund of \$18,750 (\$6,250 × 3).

Creating Your Own Emergency Fund

Considering Common Financial Emergencies

Although these calculations are helpful in determining how much you need in an emergency fund, you should consider your individual situation very carefully. For example, what if you lost your job? Did you know that for working adults who become unemployed, the median length of

time it takes to find another job is about 20 weeks, or 5 months? You may qualify for unemployment benefits during this time, but these benefits tend to be very small and too low to sustain you financially. How much money would you need on hand to live for 5 months until you could find a new job?

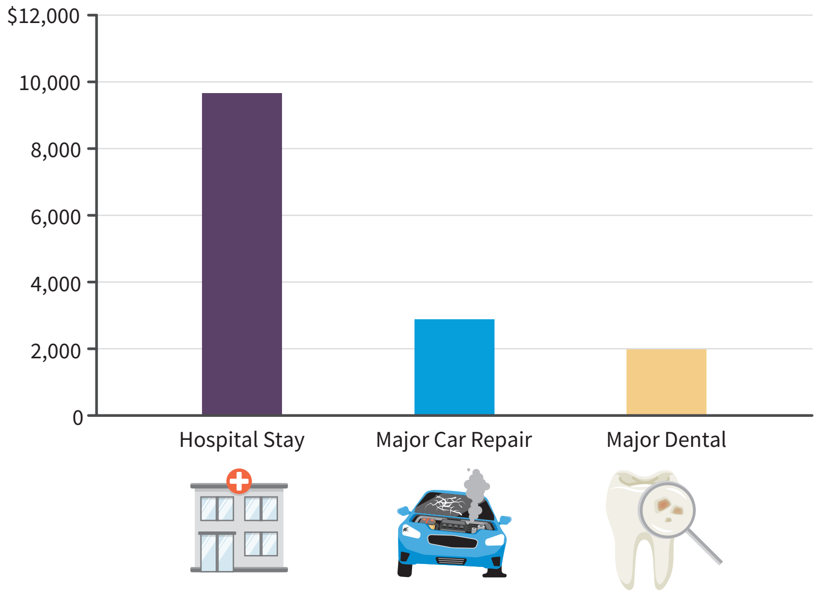
Aside from job loss, some other financial emergencies include:

- Major car repairs (especially for older vehicles).
- Major medical expenses (such as unforeseen surgeries and dental work).
- Major home repairs (not a problem if you are renting).
- Emergency travel (expect to pay about 50% more for last-minute airline tickets).

When thinking about your own emergency fund, it is important to be realistic about the cost of emergencies. Consider the expenses shown in **Illustration 7.2.3**. The figure shows the average costs for a hospital stay and the median costs for a major car repair and major dental work. Just one of these may be enough to throw you off your financial course.

ILLUSTRATION 7.2.3

Common Emergency Expenses



Sources: A. Pfunter, L. Wier, and C. Steiner, "Statistical Brief #146: Costs for Hospital Stays in the United States, 2010," *Healthcare Cost and Utilization Project* (Washington Agency for Healthcare Research and Quality, 2013); and CarMD, "The 15 Most Expensive 'Check Engine' Related Vehicle Repairs in the U.S.," *2013 Vehicle Health Index: Detailed Tabulated Data* (California Healthcare Foundation, 2014).

Using an Emergency Fund to Fill Budget Gaps

You have already learned about the importance of having and following a budget. Essentially, a budget helps you to manage income and expenses.

- If you have been using a budget, you will also know that amounts can and often do change from one month to the next.
- You want to be able to pay for things, rather than borrow money, during those months when expenses are greater than income.
- An emergency fund can be used for just this purpose—as a way to address unexpected gaps in your budget.
- If using an emergency fund to fill budget gaps, then try to replenish the emergency fund as quickly as possible.

HELPFUL HINT

You might earn a higher interest rate through an online savings account; just be sure that it is FDIC-insured.

Building Your Emergency Fund

When it comes to building an emergency fund, you have two main options:

1. Deposit money each month or pay period into a savings account (see **Helpful Hint**).

2. Maintain a combination of savings and low-cost access to credit to protect against unexpected events. For example, if your monthly income is $2,000, then you should have access to about $6,000 in emergency sources of income. The money could consist of $3,000 in savings, plus an unused $3,000 credit line (see **Helpful Hint**).

> **HELPFUL HINT**
>
> **When calculating your emergency fund ratio, only use the money you have set aside for an emergency without regard to any available credit.**

Holding highly liquid cash assets tends to be the best form of emergency savings because cash can be accessed quickly and inexpensively. However, having access to affordable credit (a low-interest-rate credit card without a balance) can provide the needed liquidity when sufficient cash is unavailable. Keep the following in mind:

- This is not an optimal strategy because the money you borrow must be paid back, usually at a high interest rate.
- Further, this approach does not work well if you need to borrow money to pay for expenses due to unemployment. In this case, you, at least temporarily, will not be earning a salary to repay the loan, which can easily lead to more debt.
- Ultimately, an approach that is based on borrowing, rather than saving, completely fails if you do not have access to credit.

In the next section, let's see how failing to maintain an adequate emergency fund might lead to a downward financial spiral.

Concepts in Action

Swarn is a full-time college student who also has a part-time job from which he earns about $800 each month. The first thing he does with each paycheck is to set aside $20 into his emergency fund. He then tries to cover his remaining expenses—about $700 per month—with the amount left over. Swarn is currently receiving a scholarship that covers his tuition, which means he only needs to worry about his other expenses (such as rent, food, and books). Right now, he has $250 in his emergency fund. Plus, as a college student, Swarn does have access to student loans, which do not require a credit check, and he may also have access to emergency student aid through his school. Is Swarn prepared for a financial emergency?

Solution

Swarn's emergency fund ratio, or months covered, is only 0.36 months ($250 ÷ $700). This means that Swarn's emergency fund will cover less than one-third of one month's expenses. Is this enough? The answer is no, but it is a start. It would be best for Swarn to have more money in his emergency fund, but until he gets to that point, he can feel less stressed knowing that he has some very low-cost borrowing options, plus some money to cover some smaller emergencies.

The Risks of Going Without an Emergency Fund

To demonstrate the necessity of having an emergency fund, consider the following case. Keep in mind, this case is an extreme example, but it does show the importance of having an emergency fund!

Tracy works as a home healthcare aide. She drives an 18-year-old car many miles a day to visit her clients in their homes. She also has two children. Her older daughter is in college and works part-time. Her younger daughter just turned 12. Tracy has not been able to repay all her debts in the past, which has lowered her credit score dramatically.

Although unexpected for Tracy, the predictable happened: Tracy's car broke down one day. She learned the repairs will cost $1,000. As Tracy does not have an emergency fund (she uses

all her paycheck to pay for basic living expenses) and cannot easily borrow money to fix the car (her credit score is too low), what can she do?

Basically, Tracy is in a bind. She is unable to qualify for low-cost credit, such as a credit card or car loan through a mainstream financial institution. Although she has access to high-cost alternative lenders, such as payday and title loan lenders, these sources will only lend her small dollar amounts.

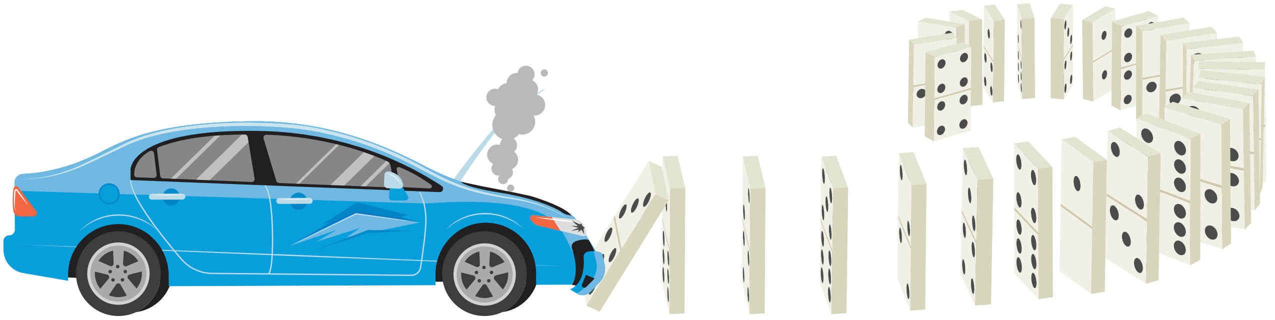
Unfortunately, this has triggered a series of unfortunate events (see **Illustration 7.2.4**). Without an emergency fund, just one major car repair can quickly have catastrophic consequences (see **Helpful Hint**):

HELPFUL HINT

Everyone will experience financial emergencies during their financial journey. How well you are prepared for these events will determine whether an emergency is a financial discomfort or an event that will throw you off your lifetime financial course.

- By not having sufficient savings or access to credit to pay for the car repair, Tracy lost her job (as she could no longer travel to clients' houses).
- After losing her job, Tracy became dependent on her oldest daughter's part-time income to pay rent and utilities.
- Her older daughter wanted more freedom and decided to move out.
- Tracy and her youngest daughter were evicted and had to move in with a friend while Tracy kept looking for work.

ILLUSTRATION 7.2.4 **How One Financial Emergency Can Spiral Out of Control**



Although Tracy's experience is an extreme example of what can go wrong if someone does not have an emergency fund, it is important to note that emergency costs can get out of hand quickly, even if the emergency is a small one. Consider Dom's situation. Dom is a college student. Just like Tracy, he faced a car repair of $1,000. Here's what happened when Dom realized he did not have the cash in an emergency fund to pay the expense:

- Dom charged the repair on his credit card.
- Over time, Dom paid the minimum monthly credit card bill, which took several years to pay off in full.
- In Dom's case, the cost of the repair with interest turned out to be more than $1,500—the original $1,000 expense plus interest paid over the years.
- Over the course of his life, that $1,500 represents close to $8,000 in lost wealth. How did this happen? Because Dom was paying down the debt instead of saving money, he lost out on the earnings he could have made.

As you can see, it really does pay to have an emergency fund in place.

End-of-Topic Assessment

Multiple-Choice Questions

1. As a general rule, how much money should be kept in an emergency fund?

- **a.** $9,700.
- **b.** $12,500.
- **c.** No less than 9 months' worth of expenses.
- **d.** Between 3 and 6 months of expenses.

2. **Calculate** Joe has cash in a savings account totaling $7,500, and his monthly expenses are $2,500. What is his emergency fund ratio?

- **a.** 0.25.
- **b.** 3.
- **c.** 2.
- **d.** 5.

3. **Calculate** Luigi has saved $4,500 in an online savings account. Does he meet the basic emergency fund ratio guideline if his monthly living expenses are $1,800?

- **a.** Yes, because he can cut back on his monthly expenses to reach the 6-month benchmark.
- **b.** No, because he has only enough in the account to cover 2.5 months of expenses.
- **c.** Yes, because he has more than enough in the account to cover 3.5 months of expenses.
- **d.** No, because he has only enough in the account to cover less than one month of expenses.

4. **Calculate** Your neighbor has monthly expenses totaling $3,725. His employer has indicated that the firm is expecting to announce layoffs soon. How much should your neighbor have in an emergency fund if he wants to cover 6 months of living expenses?

- **a.** $22,350.
- **b.** $3,725.
- **c.** $11,175.
- **d.** $20,000.

5. **Calculate** With savings of $4,300 and monthly expenses of $9,600, what is your emergency fund ratio?

- **a.** 0.2190.
- **b.** 0.6378.
- **c.** 0.4479.
- **d.** 0.4218.

6. **Calculate** With a very stable profession, if your monthly expenses totaled $3,300, approximately how much should you have in an emergency fund?

- **a.** $10,000.
- **b.** $3,300.
- **c.** $15,000.
- **d.** $7,000.

7. Which of the following is *not* a wise use of emergency fund money?

- **a.** Going to the hospital if you unexpectedly become ill.
- **b.** Avoiding foreclosure or eviction.
- **c.** Replacing an air conditioning unit for your home.
- **d.** Buying gifts.

8. Which of the following sources of emergency funds will have the *least* negative impact on your lifetime financial situation if the source is used to meet emergency expenses?

- **a.** Taking money from your savings account.
- **b.** Borrowing money using a credit card.
- **c.** Being unprepared for major car repairs, major medical expenses, and major home repairs.
- **d.** Selling investment assets.

9. Which of the following is an appropriate investment vehicle or source from which to draw emergency funds?

- **a.** A baseball card collection valued at $5,000.
- **b.** A savings account held at the local bank.
- **c.** An online checking account.
- **d.** A savings account held at the local bank or an online checking account.

10. Borrowing money in the event of job loss is a bad idea because:

- **a.** you may not have access to credit.
- **b.** you may not have the means to repay the debt.
- **c.** it may lead to bigger problems.
- **d.** you may not have access to credit or other means to repay the debt, and it may lead to bigger problems.

Adventures in Personal Finance

Short Answer

1. What are the pros and cons of using a combination of money in a savings account and low-interest credit as your emergency fund?

2. What are some instances where less than the commonly recommended emergency fund benchmark of 3 to 6 months may be appropriate?

3. Describe the different ways to build an emergency fund. What is the preferred method?

4. Many individuals use a combination of savings and low-cost credit to prepare for emergencies. Do you agree or disagree with this approach? Given your current situation, what type of emergency fund approach (all savings, all credit, or a combination of both) would you take to prepare for potential financial emergencies over the next 3 to 5 years?

Explore

1. **Calculate** **Writing** **Presentation** Think through your current life situation. How many potential financial emergencies do you face? If you own a car, could it break down? Could you lose your job if you are working? How much would it cost if you broke your leg, even if you do have health insurance? These are just some possible emergencies you may face. Identify at least five potential financial emergencies. For each emergency, estimate its cost to you. You can find ballpark cost estimates on the Internet. Be sure to include the cost of deductibles and coinsurance. Also, estimate how likely you are to experience a financial emergency in the next year (from 1 to 10, with 10 being very likely and 1 being not at all likely). Based on this information, how much do you think you should have in your emergency fund? Write a brief summary of your findings and share the results of your research in class.

2. **Writing** Conduct an Internet search for online advice on ways to build an emergency fund. Create a table that compares and contrasts the different advice obtained during your research. Summarize your findings and write a brief reaction paper describing the emergency fund approach you prefer.

3. **Writing** Visit an Internet site like **GoFundMe**. Search the site to obtain an idea of how many people are using this (and similar sites) as a way to obtain funding for emergency expenses. Write a brief opinion paper describing the ethics associated with this approach to "building an emergency fund."

Expanded Learning Activity

Calculate **Writing** **Presentation** Events such as losing a job, becoming disabled, or having a car or appliance break down come to mind when thinking about the need for an emergency fund. However, other events, sometimes on a regional or national scale, can prompt the need for drawing down emergency savings. Review governmental agency websites to determine the probability and potential costs associated with each of the following events:

- Earthquake
- Flood
- Extended drought
- Wildfire
- Land or mud slide
- Tsunami
- Short-term power outage
- Long-term power outage
- Extreme hot or cold weather

When estimating costs, determine the impact at a regional or national level as well as what you believe such an event might cost you and your household. Write a brief report of your findings. Be sure to share the results of your analysis with others in class.

Savings Accounts

LO 7.3 Identify the use and benefits of savings accounts, money market savings accounts, and certificates of deposit.

Many Americans want to lose weight. However, a dieter's success depends to a large extent on avoiding seemingly irresistible temptations. As a result, dieters often only purchase foods that are both healthy and enjoyable. In other words, successful dieters are able to change their behavior by managing access to unhealthy food, thereby making healthy food choices easier.

The same is true when it comes to money and managing your finances. However, just like a dieter, you are going to face temptations along your lifetime financial journey. One way to start managing your financial environment is to continually make good financial choices by focusing on meeting your long-term goals. You can start by building an emergency fund and then establishing other savings by using semi-restrictive accounts. Having easy access to cash can be beneficial if you run into a financial emergency, but having too much cash available can tempt you to spend it. This topic will help you identify assets and products that you can use to prudently develop savings.

Overview of Savings

Opportunity Costs

Saving money is important. If for no other reason, saving money and building an emergency fund can create peace of mind. With money in the bank, you will know that you are financially prepared, at least to some extent, for the unexpected. But what if you haven't established an emergency fund yet? Will you be able to manage the opportunity costs associated with creating and maintaining an emergency savings account?

- An **opportunity cost** is the loss of a benefit that you would have received by choosing another option.
- By putting aside money in your emergency fund, you won't be able to use the cash for other items, such as a longer vacation or a high-return (but high-risk) investment (see **Helpful Hint**).

HELPFUL HINT

Failing to save also has an opportunity cost—potentially being unprepared to meet a financial emergency.

Illustration 7.3.1 shows some opportunity costs associated with building and maintaining your emergency savings.

Ideally, the peace of mind that comes from having an emergency fund is greater than "the next best thing." For some individuals, though, having easy access to several thousand dollars may prove to be an irresistible temptation. If you know someone like this, you should recommend that he or she consider different savings techniques, particularly those that "lock" away savings.

Motivating Yourself to Save

Visualization Techniques

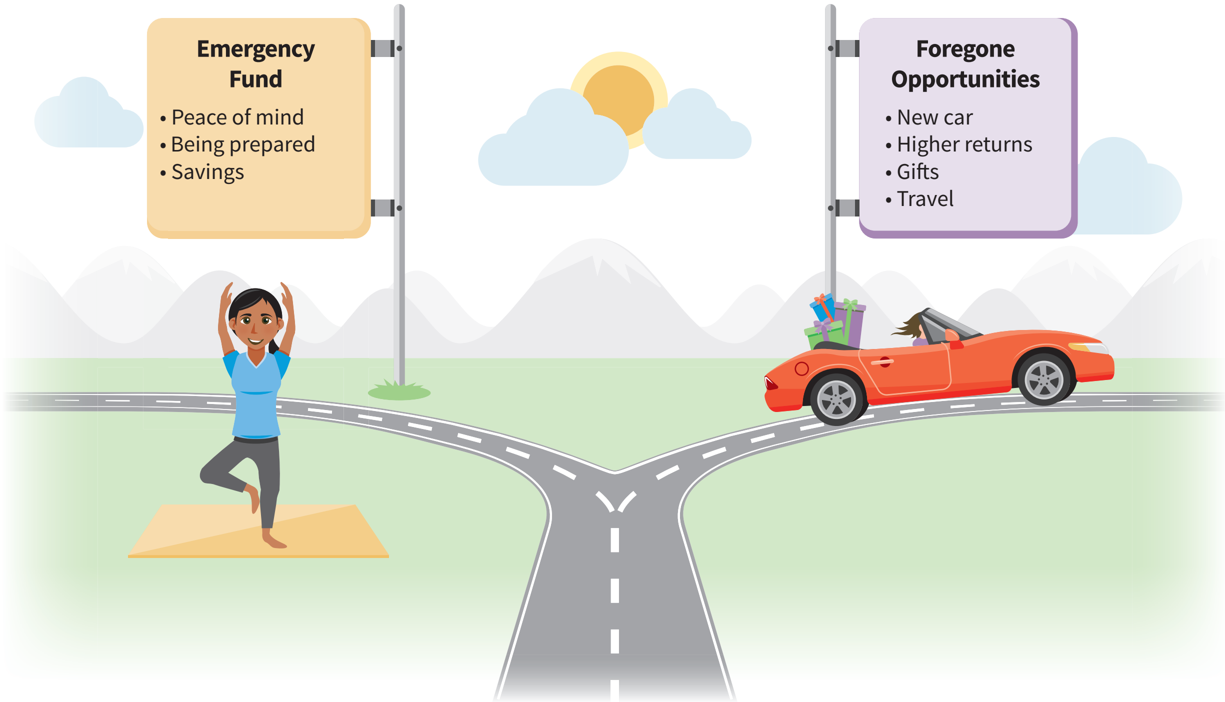
What motivates people to save is as varied as individuals themselves (see **Helpful Hint**).

HELPFUL HINT

Talking in generalities is never enough to change behavior.

- For some people to change their behavior significantly, it is helpful to use **visualization** techniques to imagine what the future will look like in real terms.

ILLUSTRATION 7.3.1 **The Opportunity Costs of an Emergency Fund**



- Sometimes the reason that people begin saving money or purchasing insurance is because a devastating event has occurred to someone they know.

Until the possibilities of life become real, it is difficult to adjust what you are doing on a daily basis. Let's see how this can play out in terms of a general savings plan. Tessa has been dreaming of a trip to Paris. She can see herself walking the narrow streets, lingering for hours with friends in the open-air cafés enjoying coffee and conversations, crossing the historic bridges, seeing the museums, and visiting the Eiffel Tower at night. She has studied the street maps, the museums, and the language. Her vision has motivated her to set aside a portion of every paycheck and save all her extra money to fulfill her dream. Tessa is making progress toward achieving her goal because she can visualize with clarity her future plans.

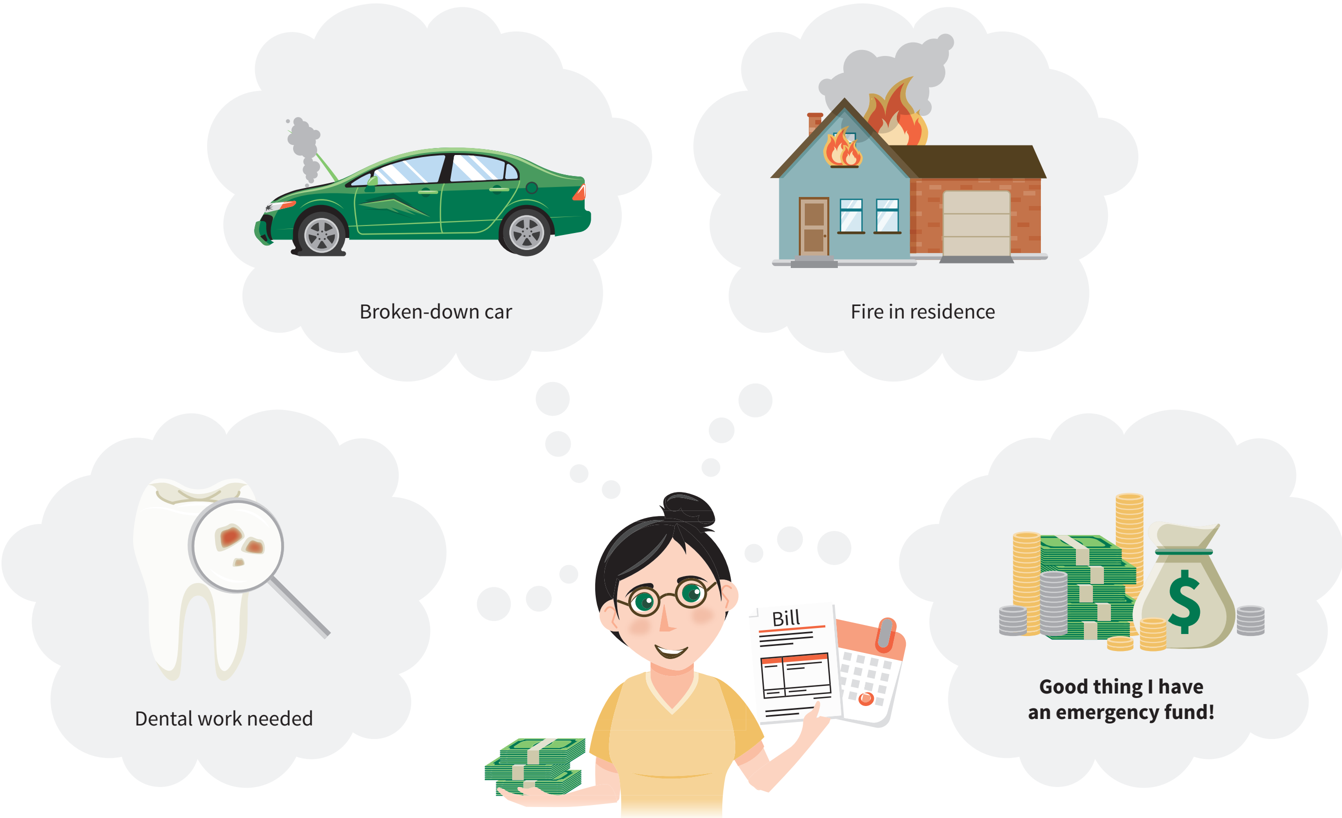
Applying Visualization Techniques to Your Savings Behavior

You can apply the visualization technique, as shown in **Illustration 7.3.2**, to building an emergency fund by trying the following.

1. Identify some emergencies that may occur.
2. Consider how these emergencies might affect you financially.
3. Think about how these emergencies could financially affect those you love.

Visualization techniques can help you find the determination to save. As you visualize possible emergencies, be sure to also visualize having the money necessary to meet an emergency, whatever it is. Try to sense the confidence and peace of mind that you feel as you see yourself overcoming any of the emergencies because you are prepared. Whatever your motivation, you should begin a savings fund for those unexpected events, if you haven't already. This advice applies to every adult, regardless of age or household status. Take action today to be financially prepared for the future!

ILLUSTRATION 7.3.2 **Considering Possible Emergencies**



Where to Save Your Money

Once you are motivated to save money, whether putting money aside for an emergency fund or other short-term savings, you need to find a safe place for your money. Let's start with the most obvious spot to hold your cash: somewhere in your house.

- You won't earn any interest on money hidden in your house.
- Further, like dieting, if your emergency fund consists of \$10 and \$20 bills hidden in your kitchen or in your dresser drawer at home and you need a little extra cash for an evening with friends, you may be very tempted to dip into your savings.
- Worse still, holding several thousand dollars of cash in your dresser drawer leaves you vulnerable to theft.

Okay, you can see that keeping money at home is not an optimal financial planning strategy. Fortunately, there are better places to stash your emergency fund. We will talk about these options next.

Safe Assets for an Emergency Fund and Short-Term Savings

In general, when deciding where to put your emergency fund and other short-term savings, there are four options from which to choose:

1. Savings account.
2. Money market account.

3. Certificate of deposit.
4. Dedicated savings account.

Although each can be obtained at a bank or credit union, these emergency fund alternatives serve different purposes.

Savings Account

A **savings account** is an interest-bearing asset that allows you, as the account owner, to earn a small return on your deposit. Banks and credit unions are the most common places to find savings accounts.

- Savings accounts provide protection against theft and loss through the **Federal Deposit Insurance Corporation (FDIC)** or the **National Credit Union Share Insurance Fund (NCUSIF)**. These agencies provide individuals with automatic deposit insurance, which guarantees that depositors get their money back (up to certain limits, generally $250,000 for individuals) even if the financial institution goes bankrupt.
- Savings accounts also allow for easy access to funds through ATM withdrawals or in-person withdrawals at the bank.
- Keep in mind that the interest you earn on any savings account is always taxable (see **Helpful Hint**).

HELPFUL HINT

Taxes may not be an issue right now if you are in college, but as your income increases, you will want to keep an eye on the amount of taxes being paid.

Money Market Account

A **money market savings account (MMSA)** combines the benefits offered by savings and checking accounts, including FDIC and NCUSIF insurance protection up to $250,000 for individuals.

- MMSAs pay a higher interest rate on the money deposited as the amount in the account increases.
- Access to the money is easy but slightly more restrictive than a savings account. You are limited to the number of withdrawals you can make each month, but these withdrawals can be made using a check, an ATM, or in person at the bank or credit union.

HELPFUL HINT

Don't forget to check online banks when looking for these accounts. Often, the interest you can earn will be higher online.

Certificate of Deposit

A **certificate of deposit (CD)** is a savings product that is generally purchased with one lump-sum dollar amount. CDs are different from savings and checking accounts in that CDs restrict withdrawals from the account until some future date, referred to as the **maturity date** (see **Helpful Hint**).

- CDs are also insured by the FDIC or NCUSIF.
- In exchange for restricted access (reduced liquidity), the financial institution agrees to pay a higher interest rate than what is offered on savings or money market accounts.
- If you withdraw the money on deposit before the maturity date, you will incur a penalty, which means you will lose some of the interest that you have earned (typically the last 3 to 6 months of interest credited to the account).

CDs provide a very safe place to keep an emergency fund for those who are worried about being tempted to spend money on relatively unimportant things. However, if an emergency does occur, the penalty is not so onerous that it would prevent someone from accessing the money.

Dedicated Savings Account

A popular variation of a traditional CD is called a **dedicated savings account**.

- The variation is that these accounts allow you to contribute additional money to the CD until the maturity date.

- Like traditional CDs, the early withdrawal penalty helps stop the impulse to purchase unnecessary items using emergency funds while also providing access to the funds in the event you do experience an emergency.
- Dedicated savings accounts pay interest rates similar to traditional CDs.

Illustration 7.3.3 compares the four approaches that you can use to hold emergency and short-term savings (see **Helpful Hint**).

HELPFUL HINT

Study Illustration 7.3.3 carefully to find the best savings approach for you!

ILLUSTRATION 7.3.3

Four Alternatives for Emergency Savings

Savings Account	• Very liquid • Low returns • Very flexible • FDIC- or NCUSIF-insured
Money Market Savings Account	• Liquid, has monthly withdrawal limits, may have minimum balance requirements • Higher returns than savings accounts but lower returns than CDs • Limited flexibility • FDIC- or NCUSIF-insured
Certificate of Deposit	• Reduced liquidity because of early withdrawal penalty • Better returns • Limited flexibility; requires lump-sum investment • FDIC- or NCUSIF-insured
Dedicated Savings Account	• Reduced liquidity because of early withdrawal penalty • Better returns • Limited flexibility; allows multiple deposits • FDIC- or NCUSIF-insured

Concepts in Action

Luke, Ann, and Eddie recently met for lunch. Over the course of their meal, Ann raised the topic of saving for an emergency fund. She mentioned that she just received $1,500 from her grandmother as a birthday gift but that she has trouble saving. If she has an extra dollar, she is likely to spend it. Luke laughed and said that he has the opposite problem. He is probably too frugal and hardly ever spends money that he has saved. Eddie added that he is more like Ann but that he only has a few extra dollars each paycheck that he can save. Right now, he is spending this money, but he would like to start saving if possible. Recommend a savings product that would be appropriate for Ann, Luke, and Eddie.

Solution

Ann should consider using a certificate of deposit (CD). The early withdrawal penalty associated with the CD may deter her from spending the $1,500. Luke can use any of the products discussed, but the one that pays the highest interest rate would be an excellent choice. A money market account makes sense. A money market account will provide high liquidity and a higher rate of return than a traditional savings account. He could also use a CD, but the early withdrawal penalty could distress a saver like Luke. Luke should also consider investing some of his money. Eddie, on the other hand, should consider opening a dedicated savings account, which will allow him to make periodic deposits. The early withdrawal penalty might deter his impulse spending.

End-of-Topic Assessment

Multiple-Choice Questions

1. Tony has $3,000 saved in a money market account. He just received a birthday gift and is deciding what to do with the money. He has narrowed down his options to either increasing his savings or purchasing a subscription to an online video streaming service. If he chooses the video streaming service, the savings alternative is:

- **a.** a form of regret.
- **b.** an irresistible temptation.
- **c.** the opportunity cost.
- **d.** the impulse cost.

2. Tony struggles to save money. He knows it is important, but his immediate needs and wants make it difficult for him not to spend the money he has set aside. Which of the following options would be most effective for him to start building savings?

- **a.** Giving $20 to his friend Maria each week and ask her to save the money for him.
- **b.** “Hiding” cash in his apartment.
- **c.** Automatically having money deposited into a restricted account each month.
- **d.** Accepting the fact that he probably will not be able to save money.

3. One way to become more motivated to save for emergencies is to:

- **a.** consider how the people you love would be affected if you could not pay for an emergency.
- **b.** rely on others to pay for your emergencies.
- **c.** withdraw and aggressively invest your current savings so that you will increase your emergency fund savings.
- **d.** consider that your emergency fund savings balance exceeds the FDIC insurance limits.

4. An effective way to motivate yourself to save involves:

- **a.** visualizing where you want to be in the future.
- **b.** feeling angry whenever you spend money.
- **c.** using CDs exclusively for emergency fund savings.
- **d.** generalizing your dreams and financial goals.

5. Which of the following is a threat associated with keeping cash at home?

- **a.** Theft.
- **b.** Lost interest.
- **c.** No protection against impulse purchases.
- **d.** Loss of interest, theft, and no protection against impulse purchases.

6. All of the following charge a depositor an early withdrawal fee, *except* a:

- **a.** certificate of deposit.
- **b.** money market savings account.
- **c.** dedicated savings account.
- **d.** All accounts charge an early withdrawal fee.

7. Lucy and Doug are engaged and hoping to get married in a few months. Lucy has been developing a budget. She knows that their combined income will be about $80,000 per year. After paying taxes and other employer withholdings, she thinks they will have take-home pay of approximately $55,000. Lucy is an aggressive saver. She thinks that she and Doug can save at least $500 per month in an emergency fund. Currently, they have about $5,000 of savings in a savings account. What type of account do you recommend to Lucy and Doug for their current and new savings to earn the highest interest rate?

- **a.** Savings account.
- **b.** Money market savings account.
- **c.** Cash in a home vault.
- **d.** Dedicated savings account.

8. All of the following bank products allow a depositor to make additional contributions to the account, *except* a:

- **a.** savings account.

   b. money market savings account.
   c. certificate of deposit.
   d. dedicated savings account.

9. An account that pays greater than savings account interest but limits the number of withdrawals per month is known as a:

   a. money market savings account.
   b. certificate of deposit.
   c. dedicated savings account.
   d. certificate of deposit and dedicated savings account.

10. Which of the following is a benefit of holding money in a CD for an emergency fund?

   a. The money cannot be withdrawn without a penalty prior to maturity.
   b. The money could be earning a higher rate of return if it were invested more aggressively.
   c. The money is earning a higher rate of return than a savings account.
   d. There are no benefits to holding money in a CD for an emergency.

Adventures in Personal Finance

Short Answer

1. Match the following terms with the correct definitions.

a. Opportunity cost.	**1.** Insures deposit accounts at banks against loss if the bank becomes insolvent.
b. Money market account.	**2.** An interest-bearing account providing depositors a safe and secure place for money.
c. National Credit Union Insurance Fund.	**3.** The foregone benefit that you would get from doing the next best thing.
d. Certificate of deposit.	**4.** A savings account that restricts withdrawals from the account until a specific date; in exchange, the depositor receives a higher interest rate.
e. Federal Deposit Insurance Corporation.	**5.** An account that pays higher interest rates than a savings account, with a restricted number of monthly withdrawals.
f. Savings account.	**6.** Insures deposit accounts at credit unions against loss if the credit union becomes insolvent.

2. **Calculate** Scotty is a single man living in Florida. He currently has the following account balances at a single local FDIC-insured bank: (1) $100,000 in a savings account, (2) $85,000 in a 3-year CD, (3) $30,000 in a money market account, and (4) $40,000 in a 5-year CD. If the bank were to go bankrupt tomorrow, how much will Scotty receive from the FDIC?

Explore

1. Not all savings accounts are equal. Although their function and purpose may be uniform, many financial institutions charge fees, which can quickly reduce the account balance. They also may require minimum amounts to open accounts and limit the number of withdrawals from the account. Contact three local financial institutions and compare the institutions based on the following fees:

   a. Monthly account maintenance fees.
   b. Minimum balance requirements.
   c. Returned check fees (if a check written from the account cannot be cashed because of insufficient funds).
   d. Maximum number of withdrawals (both electronically and in person).
   e. Early withdrawal penalty for certificates of deposit.
   f. ATM fees.

2. In addition to knowing the fees associated with an account, you should also know how easy it is to monitor your account. For each of the three financial institutions that you selected in Explore Question 1, also inquire regarding the following services that may be offered by the financial institution:

   a. Online banking services.

  b. Telephone banking.

  c. Mobile banking applications.

3. Interest rates vary widely across institutions (as well as within institutions) based on the type of account being opened. For each of the three financial institutions that you have selected in Explore Question 1, identify the interest rates being offered to depositors for each of the following accounts:

  a. Savings account.

  b. 2-year certificate of deposit.

  c. Money market account ($1,000).

4. **Writing** Write a brief report based on the information that you obtained in Explore Questions 1–3. Be sure to discuss which financial institution you would choose to open a new emergency savings account. Explain clearly why you made this choice.

Expanded Learning Activity

Writing The FDIC is an independent agency of the U.S. government that protects the money that depositors place in banks and savings associations. Visit the FDIC website and obtain information about exactly what FDIC insurance does and does not cover. Be sure to check whether savings accounts, checking accounts, money market deposit accounts, and certificates of deposits are covered by FDIC insurance. Also, determine if there are any products that a bank may offer that are not covered by FDIC insurance. Finally, summarize the rules regarding the maximum amount for which any one depositor is insured. Write the results of your research in a short paper.

Using Roth IRAs Effectively

LO 7.4 Explain how a Roth IRA provides savings and tax benefits.

Imagine that you live in a world where it is possible to put money aside for an emergency and build tax-free wealth for retirement at the same time. In the world of personal finance, this is like having your cake and eating it too. Well, there is such a thing: a Roth IRA (individual retirement account).

Most people use Roth IRAs to help save for retirement. However, a Roth IRA can also serve as an emergency source of funds. As opposed to the low-risk, low returns of savings accounts or the high-risk, higher returns of investments (as well as the tax implications), a Roth IRA reduces the **opportunity costs** associated with traditional emergency fund holdings and conventional investments. In this topic, we discuss how you can effectively use this tool.

Overview of Roth IRAs

Roth IRAs Defined

Traditionally, Congress has promoted retirement savings at the household level by allowing individuals to put money into accounts, such as 401(k)s, 403(b)s, and traditional IRAs (we will talk about each of these in more detail in future chapters), on a **pretax basis**. That is, contributions to these accounts lower taxable income and, as long as the money remains in these accounts, the earnings grow tax-deferred (see **Helpful Hint**). Taxes are usually paid when the money is taken out. If individuals take money out before retirement, they usually pay a 10% penalty plus taxes on the money withdrawn!

HELPFUL HINT

Tax-deferred just means that investment income in the account is not currently taxed.

More than 20 years ago, Congress flipped the formula and created the Roth IRA as a special investment account that allows individuals to put money aside on an **after-tax basis** (contributions do not lower taxable income), with the caveat that if the money is held until retirement no taxes ever need to be paid on the growth of the account! A **Roth IRA**, therefore, is an individual retirement account that offers two significant advantages:

1. Investments held in the account accumulate earnings on a tax-deferred basis.
2. Money pulled from the account is tax-free if certain conditions are met (we will discuss those conditions later in this topic).

Illustration 7.4.1 shows the similarities and differences between traditional and Roth IRAs.

ILLUSTRATION 7.4.1

Comparing Traditional and Roth IRAs

Traditional IRA	Roth IRA
• Make a contribution • Receive an income **tax deduction** • Pay less tax today • Money grows tax-deferred • **Pay taxes** on money taken out of the account in the future	• Make a contribution • **No income tax deduction** • Postpone tax advantage to the future • Money grows tax-deferred • **Pay no taxes** on money taken out of the account in the future

Tax-Deferred Earnings

Tax-deferred earnings mean that there is no tax assessed on the earnings in the account in the year that the earnings are received.

- For example, if your marginal tax rate is 22% and you earn $1,000 in interest in your Roth IRA, you will not have to pay any taxes on those earnings this year.

- However, if you earn the $1,000 in a traditional savings account, then you will have to pay as much as $220 in taxes on the earnings (even if you leave the interest in the bank, you will still have to pay taxes on it). After taxes, you will be left with only $780.
- Tax-deferred growth is a great benefit!

In addition to tax-deferred growth, withdrawals from Roth IRAs receive special tax treatment. *This is the feature that allows you to use a Roth IRA effectively as a source of emergency funds.* We will talk about these withdrawals next.

Roth IRA Withdrawals

To make sense of Roth IRA withdrawal options, you first need to remember two key terms. The **principal** is the amount that you deposit into the account. **Earnings** are generated from the different types of investments within the account. We are now ready to look at Roth IRA withdrawals in more detail.

There are three types of withdrawals available when a Roth IRA is used.

1. Withdrawal of principal occurring any time after the account is initially funded.
2. Qualifying withdrawal of earnings.
3. Nonqualifying withdrawal of earnings.

Withdrawal of Principal

HELPFUL HINT

Remember that you already paid tax on the money contributed to a Roth IRA.

With Roth IRAs, you can withdraw your principal at any time for any purpose without having to pay taxes on the withdrawal (see **Helpful Hint**).

- This means that you can have your principal hard at work for you, generating tax-deferred earnings.
- Then, if you have a financial emergency, you can take out the principal and use it. The money that you leave in the Roth IRA account will continue to earn interest to help you reach your long-term financial goals.
- Think of it this way: you can take out everything you put in totally tax- and penalty-free at any time!

Illustration 7.4.2 shows how this works. Let's say that your Roth IRA includes $3,000 of principal (what you put in over time) and $600 of earnings (the amount earned on your principal), for a total balance of $3,600. Now assume that you need to withdraw $2,500 for an emergency. The good news is that you can take the $2,500 out tax- and penalty-free. Why? Because the distribution is less than your principal. The downside is that your account value will drop to $1,100, which also means that your new "emergency fund," or principal remaining, will be only $500.

Qualifying Distribution

What if you are fortunate enough to never have a financial emergency that requires you to take money out of your Roth IRA? In this case, your principal and earnings in the Roth IRA will continue to grow tax-deferred and accumulate additional earnings until you take the money out. A **qualifying distribution** of earnings from a Roth IRA is tax-free if it meets the following two conditions:

1. You are at least 59½ years old, disabled, or use the funds to purchase a first home (up to $10,000).
2. The Roth IRA account has been open for at least 5 years.

If you start saving when you are young, a Roth IRA can save you hundreds of thousands of dollars in taxes over the long run! This is the reason that holding some investment assets in a Roth IRA is generally highly recommended.

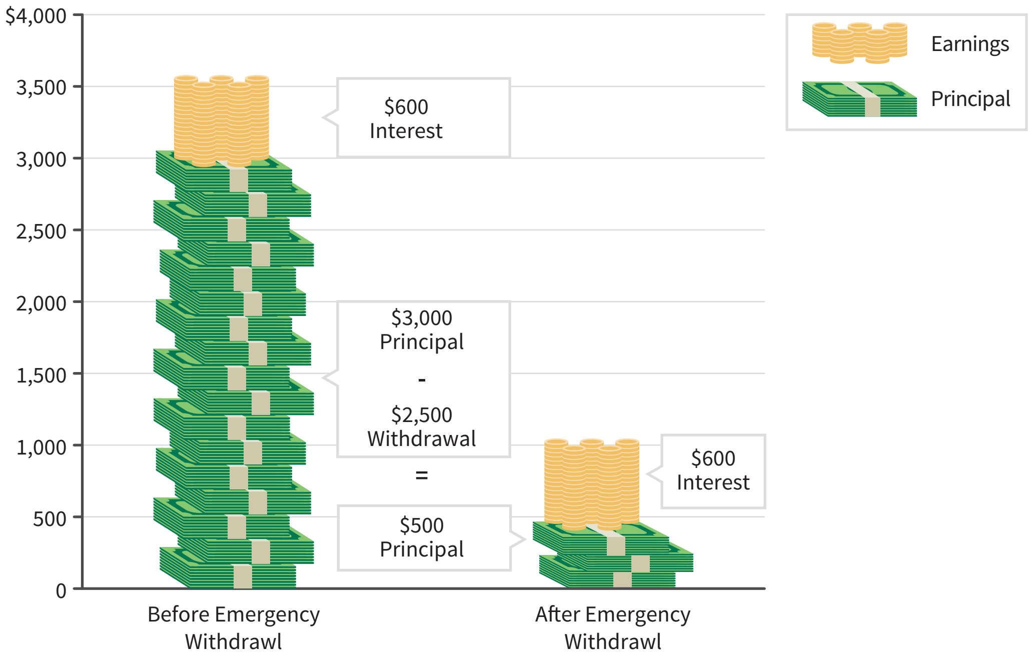


ILLUSTRATION 7.4.2

Roth IRA Account Before and After an Emergency $2,500 Withdrawal

Nonqualifying Distribution

Unfortunately, there may be instances when you might need to withdraw principal *and* earnings but you have not met the conditions for a qualifying distribution. When this happens:

- You will owe ordinary income taxes plus penalties on the earnings you withdraw. Penalties are 10% of the taxable portion of the distribution. If you are 59½ years of age or older, however, the penalty will be waived (but not the tax if the account has been open less than 5 years).
- You should avoid taking nonqualifying distributions if at all possible as the costs—taxes and penalties—can add up quickly and hurt you at tax filing time.

Illustration 7.4.3 shows the financial consequences of making a nonqualified withdrawal if your Roth IRA includes $3,000 of principal and $600 of earnings (for a total balance of $3,600) and if you are in a 22% marginal tax bracket.

$3,600 Nonqualifying Distribution
• $3,000 returned (tax- and penalty-free)
• $60 penalty (10% of $600)
• $132 federal income tax (22% of $600)
• $192 in total taxes and penalty

ILLUSTRATION 7.4.3

Result of Taking a 100% Nonqualifying Distribution from a Roth IRA

Traditional IRA Withdrawals

It is important to remember that the strategies described so far apply only to Roth IRAs. **Traditional IRAs** do not provide the same flexibility in terms of withdrawals:

- Some or all future withdrawals from traditional IRAs will be fully taxable.
- Traditional IRAs are subject to early withdrawal penalties (see **Helpful Hint**). Exceptions to the penalty include withdrawals after age 59½, due to disability, on account of the owner's death, first-time home purchase (up to $10,000), qualified higher education expenses, or to purchase medical insurance if you are unemployed.

HELPFUL HINT

Because distributions from traditional IRAs are fully taxable and may be subject to an early withdrawal penalty, traditional IRAs should *not* be used for emergency funds.

Opening, Funding, and Using Your Roth IRA

Establishing a Roth IRA

The following are the basic requirements that you must meet to contribute to a Roth IRA.

1. You must have **earned income** that is equal to or greater than the amount you contribute to the Roth IRA. (A non-working spouse may use the earned income of the working spouse to open an IRA.)
2. You may only contribute up to an annual limit of $5,500 (for 2018). This is the yearly maximum, not the amount per institution. This means that if you have more than one IRA (this includes a Roth and a traditional IRA), the maximum you may contribute to any or all accounts is $5,500. If you are older than age 50, you may add $1,000 to the limit.
3. Keep in mind that it is possible to hold a traditional IRA, a retirement plan, and a Roth IRA at the same time. In fact, you may hold multiple retirement accounts at the same time throughout your life.
4. Your **adjusted gross income (AGI)** must be less than $120,000 in 2018 for single tax filers.

HELPFUL HINT

Most investment companies—mutual fund firms and brokerage companies such as Fidelity, Charles Schwab, TD Ameritrade, T. Rowe Price, and Vanguard—also assist individuals in opening and contributing to Roth IRAs.

Once you determine if you meet the basic requirements, you may open your Roth IRA through a bank, credit union, or other financial institution (see **Helpful Hint**). Part of opening your Roth IRA account involves directing how you want the funds invested. Let's discuss your Roth IRA investment options next.

Roth IRA Investment Options

As with most products and services that offer multiple benefits, the use of a Roth IRA can be complicated, especially when compared to holding money in a savings account. When you set up a Roth IRA, you need to tell the financial institution how you want to invest your money. Typically, you will have many different alternatives, including:

- Bank products (like certificates of deposit and money market accounts).
- Mutual funds.
- Exchange-traded funds (ETFs).
- Stocks.
- Bonds.

Keep in mind that only deposits at FDIC- and NCUA-insured institutions are protected against losses. Investments that you can purchase through your Roth IRA may provide a higher rate of return, but they will also entail more risk (we will discuss mutual funds, ETFs, and other investments in a later chapter).

If you do decide to use a Roth IRA for an emergency fund:

- Revisit your risk tolerance and anticipate how often you may need to dip into the account to pay expenses.
- **Illustration 7.4.4** shows how a married couple with two children, a mortgage, two cars, and a modest lifestyle might allocate their $5,500 Roth IRA investments to serve the purpose of saving for retirement and holding emergency fund assets.
- As shown in the illustration, it is possible to hold a variety of investment and saving products in a Roth IRA. In fact, it is possible to create a diversified portfolio comprised of different asset classes, including stocks, bonds, cash, commodities, and other investments.

Transferring Money in and out of a Roth IRA Account

After you open a Roth IRA account, your next step is to fund it. This is usually done using one of three options.

1. Writing a check and mailing it to the financial institution.

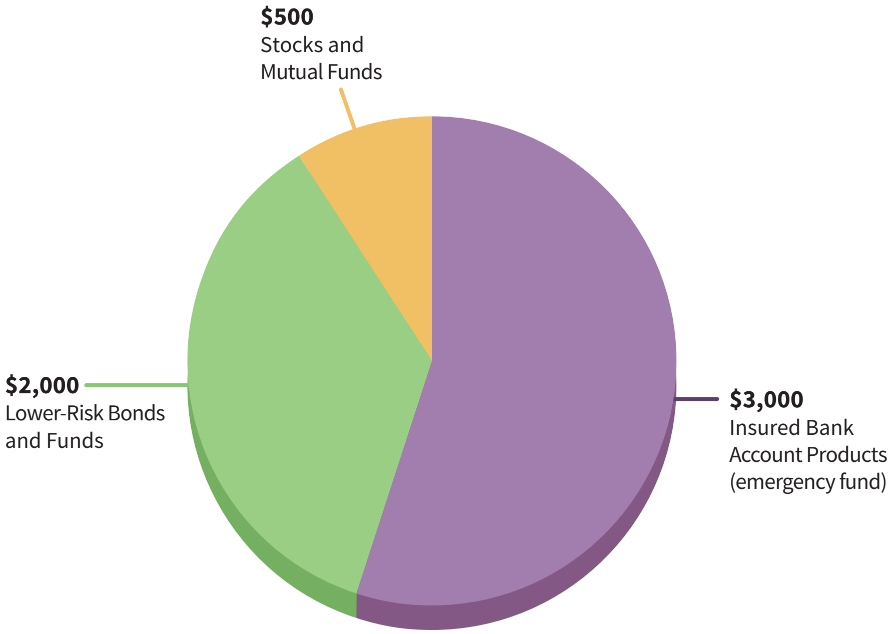


ILLUSTRATION 7.4.4

Example Allocation of Assets for Retirement and Emergency Savings in a Roth IRA

2. Initiating an electronic payment to the investment company from your financial institution (e.g., bill pay or wire transfer).
3. Authorizing the investment company to pull the money out of your bank account (see **Helpful Hint**).

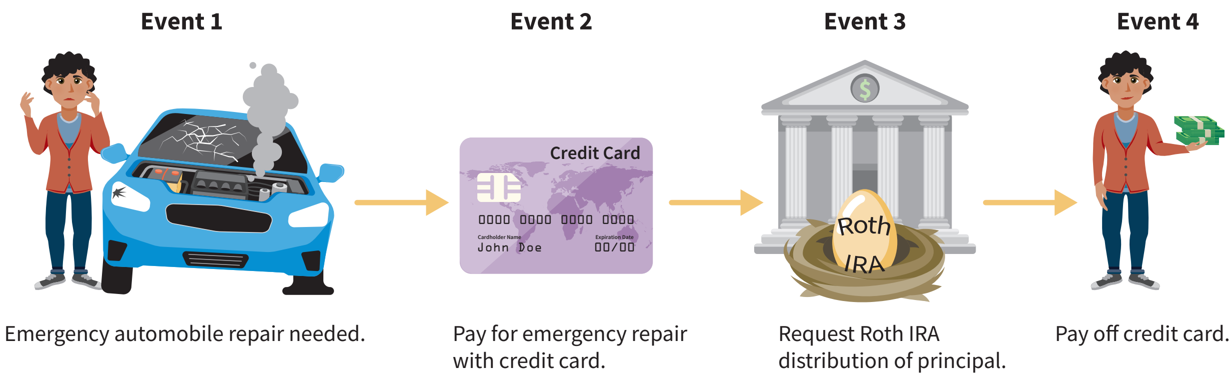
HELPFUL HINT

You can request that an automatic savings plan be established, which allows the Roth IRA provider to automatically deduct a predetermined dollar amount from your savings or checking account on a regular basis (weekly and monthly deductions are typical).

Remember, Roth IRAs are designed to be very flexible. These three options can be used to make additional contributions to the account throughout the years. The more that is saved on a regular basis, the more that will accumulate on a totally tax-free basis.

Withdrawing money from your Roth IRA account is also straightforward. However, if your Roth IRA is with an investment company, it may take 2 to 3 business days before the money reaches your checking account (you can accelerate this process for a fee). **Illustration 7.4.5** shows how you can combine a Roth IRA with a credit card to deal with situations where money is needed quickly.

ILLUSTRATION 7.4.5 **Combining Emergency Fund Tools to Pay Bills Quickly**



Essentially, the delay associated with receiving money from a Roth IRA can be viewed as a benefit and a drawback:

- **Benefit:** You will be less tempted and less likely to use your Roth IRA emergency fund for non-emergencies because there can be a delay of a few days. This will help you leave the money in the account until you truly need it.

- **Drawback:** If you do need the money, it will take a couple of days to obtain cash. Depending on the emergency, this may not be a problem. For example, if the emergency is a major car repair, it generally takes a mechanic a couple of days to finish the work, at which time payment will be due. You could also use a credit card as shown in Illustration 7.4.5. Similarly, medical and other unexpected bills have a payment due date that is generally after services have been received. This should provide plenty of time to initiate a Roth IRA withdrawal.

Concepts in Action

Audrey is 33 years old. She is doing well managing her financial situation. She has clear financial goals and a steady income of $52,000. She has already created a budget, and she tracks her expenses regularly. Based on her fixed and dedicated expenses, Audrey has determined that she needs an emergency fund of at least $10,000. She plans to set aside $150 per month to establish this fund. Audrey wants to reach her goals as quickly as possible while making the most of her emergency fund savings. Should she consider a Roth IRA for her emergency fund? If yes, how might she invest the account? How will she be taxed if she needs to make a withdrawal in a few years' time?

Solution

Audrey should consider opening a Roth IRA. Within the account, she might allocate $100 to very safe and secure investment alternatives. She can hold cash in the Roth IRA until she has enough to purchase a certificate of deposit. With the remaining $50, she can be more aggressive and purchase mutual funds that own stocks. Audrey should also set up an automatic payment to the Roth IRA on a monthly basis to make saving easier.

Let's assume Audrey meets her savings goal of $150 each month, or $5,400 after 3 years. Including interest, the balance in her Roth IRA account should then be at least $6,200. Now assume at that time Audrey's car breaks down and her mechanic says she should just buy another car. If Audrey finds a reliable used car for $4,000, she can withdraw the $4,000 from her Roth IRA, leaving $2,200 in the account. Audrey would not have to pay any taxes or penalties on the $4,000 withdrawal.

As an alternative, Audrey could fund an online savings account up to $10,000 first. After the account has been funded, she could then move $5,500 into a Roth IRA (assuming that she has earned income equal to this amount). She will continue to add to her online savings account. The following year, Audrey can move $4,500 from the bank account into the Roth IRA. At that point, she will have a small cash reserve for small unexpected expenses and the full $10,000 in the Roth IRA for larger emergencies.

End-of-Topic Assessment

Multiple-Choice Questions

1. All of the following are true about Roth IRAs, *except*:
   - **a.** contributions to a Roth IRA are made with pretax dollars.
   - **b.** it's easy to get your money out of a Roth IRA.
   - **c.** the broad range of investment options in Roth IRAs offer higher returns than bank accounts.
   - **d.** contributions to a Roth IRA are made with after-tax dollars.
2. Which of the following statements *best* describes the concept of tax-deferred growth?
   - **a.** Earnings are never taxed.
   - **b.** Earnings do not accumulate in the account until after taxes have been paid.
   - **c.** Taxpayers can take deductions for the taxes that they pay on the earnings in the account.
   - **d.** Earnings within an account are not taxed as income until the earnings are withdrawn from the account, which could be many years after the earnings were first credited to the account.
3. Roth IRAs allows individuals to:
   - **a.** set money aside for emergencies.
   - **b.** reduce the opportunity cost of emergency funds.

c. receive potential tax-free growth on investment earnings.

d. set money aside for emergencies, reduce the opportunity costs of an emergency fund, and receive potential tax-free growth.

4. Roth IRA accounts are unique because:

a. they can only hold a limited number of investments.

b. investment earnings receive unique tax treatment.

c. earnings are taxed at the lower capital gains tax rate.

d. they are no different than brokerage accounts or 401(k) plans.

5. **Calculate** James established a Roth IRA and funded it with \$5,500. By the next year, the Roth IRA was valued at \$7,230. Yesterday, James found out emergency car repairs will cost him \$3,000. What is the maximum that James can withdraw tax- and penalty-free?

a. \$7,230.

b. \$5,500.

c. \$3,000.

d. \$2,600.

6. Lannie funded her Roth IRA yesterday. Unfortunately, today she had an unexpected financial emergency. When can she take out her contribution to the Roth IRA without a penalty?

a. Today.

b. In 5 years.

c. When she reaches age 59½.

d. In 3 days.

7. A qualified distribution from a Roth IRA can take place:

a. when you reach age 59½.

b. when the Roth IRA has been open for 5 years.

c. anytime you withdraw your contributions/principal.

d. when you reach 59½ years old and the Roth IRA account has been open for at least 5 years.

8. All of the following are true of traditional IRAs, *except*:

a. they are appropriate accounts to hold emergency funds.

b. contributions are made with pretax dollars.

c. contributions are deductions FOR AGI.

d. withdrawals before the account holder reaches age 59½ years old are taxable and may be subject to a penalty.

9. At which type of firms can you establish a Roth IRA?

a. Mutual fund companies.

b. Banks.

c. Credit unions.

d. Banks, credit unions, and mutual fund companies.

10. Who of the following may establish a Roth IRA?

a. Lamar, who is enrolled in college and has \$9,000 in scholarships.

b. Mary, who is retired and is taking distributions from her traditional IRA.

c. Nelda, who is still in college and has a part-time job as a sales clerk.

d. Shelby, who had \$3,000 of interest income last year.

Adventures in Personal Finance

Short Answer

1. Describe the advantages and disadvantages associated with using a savings account for an emergency fund.

2. Explain why a Roth IRA is a good place to hold emergency funds.

3. How could you benefit if you never use your Roth IRA funds for emergencies?

4. What are reasons for and against investing in certificates of deposit in a Roth IRA?

Explore

1. Think through your current life situation. Why would you choose to use a Roth IRA as the type of account for your emergency? What reasons can you give for choosing some other option?

2. **Calculate** John has diligently deposited \$1,200 per year (\$100 per month) into his Roth IRA for the past 3 years (36 months). John is using his Roth IRA as both a retirement savings plan as well as an emergency fund. Because John knows that he may need to use money from his Roth IRA, he has not invested the account aggressively, but he has earned a reasonable rate of return using an online bank account. He currently has \$4,500 in the Roth IRA. He has decided to take a new higher-paying job in a neighboring state. John quit his current job and has just enough savings to get him to his new job and through the first pay period. What will happen if, halfway into the move, the transmission in John's truck breaks and the repair bill is \$2,500?

a. If John were to withdraw money from his Roth IRA to pay for the repair, how much could he withdraw and not incur any taxes or penalties?

b. Assume instead that John does not want to use his Roth IRA to pay for the emergency, but he also does not have any other cash available. What are some other ways that John could pay for the repairs?

3. Mr. and Mrs. Lewinski have $50,000 in traditional IRAs and 401(k) plans. They have monthly living expenses of $4,000. They currently have $1,500 in cash. Comment on the following.

a. The appropriateness of their cash holdings.

b. The potential use of their IRAs and 401(k) plans in an emergency.

If Mr. and Mrs. Lewinski contribute $500 a month to the traditional IRAs, what might you recommend to ensure they have sufficient emergency funds? As you address this question, focus on their saving behavior and the wisdom of using a traditional IRA versus a Roth IRA.

Expanded Learning Activity

Writing You have learned that a Roth IRA can hold many types of investment assets. Visit the **Internal Revenue Service (IRS)** website as a source to determine which of the following assets may be purchased and held in a Roth IRA.

- Artwork.
- Stocks.
- Postage stamps.
- Mutual funds.
- Alcoholic beverages.
- Certificates of deposit.
- U.S. gold coins.
- Vacation property.

Summarize the results of your research in one or two pages. Be sure to explain why the IRS prohibits certain assets from being held in a Roth IRA.

U.S. Savings Bonds

LO 7.5 Describe the benefits and limitations of U.S. savings bonds.

At some point in your travels, have you been sent on a detour because of construction, an accident, or some other event? Perhaps you have been delayed on a road trip because of something that you did not take care of in advance, like checking the oil, filling the car with gas, or making sure the tires were properly inflated. Detours and delays are often inconvenient and frustrating, but if you remain focused on your end destination, delays can be overcome.

Similarly, it is possible that you will run into a financial roadblock, such as receiving a negative consumer banking report. With a negative consumer banking report, it becomes difficult to open a new savings or checking account. Without access to a savings or checking account, it becomes difficult to save in a safe and efficient way to achieve future goals. The good news is that the U.S. government has a solution for those who need a savings alternative: U.S. savings bonds.

Overview of U.S. Savings Bonds

A **U.S. savings bond** (see **Illustration 7.5.1**) is a way for nearly all Americans to lend money to the U.S. government (see **Helpful Hint**). In exchange, the federal government agrees to pay you interest. There are several aspects of this paid interest that are worth noting.

- The interest is automatically reinvested and is compounded semiannually. **Compounding interest** occurs when the interest earned begins to earn additional interest.
- Interest paid on U.S. savings bonds is added to the value of the bond rather than being paid out directly to the bondholder.
- U.S. savings bonds continue to earn interest for 30 years from the issue date.
- The interest rate paid on U.S. savings bonds varies depending on the type of bond purchased; however, the rates are generally higher than the savings rates paid by banks and credit unions.

HELPFUL HINT

Unlike U.S. Treasury bills and notes that require thousands of dollars to make an investment, U.S. savings bonds can be purchased for as little as $25.

ILLUSTRATION 7.5.1

U.S. Savings Bond

HELPFUL HINT

U.S. savings bonds are available to everyone and have historically been a popular savings option.

Benefits of U.S. Savings Bonds

Illustration 7.5.2 highlights some of the most important advantages associated with investing in U.S. savings bonds (see **Helpful Hint**). Although U.S. savings bonds have become less commonly used in recent years—primarily because the interest paid tends to be low—U.S. savings bonds offer important benefits:

ILLUSTRATION 7.5.2

Benefits of Owning U.S. Savings Bonds

Benefits of U.S. Savings Bonds
• Very safe • Easy to buy • Easy to redeem • Tax-advantaged

1. **Safety:** U.S. savings bonds are some of the safest investments in the world. Although bank accounts are insured by the FDIC, a federal government agency, U.S. savings bonds are backed by the full faith and credit of the U.S. Treasury.
2. **Tax-free interest at the state level:** The interest earned on U.S. savings bonds when cashed in is taxable on your federal income tax return, but the interest income is tax-free at the state level. Tax on the interest earned from bonds can be avoided altogether if the proceeds from the redemption of the bonds are used to pay tuition and fees for college. So long as the taxpayer's adjusted gross income (AGI) is below a certain level, then no tax needs to be paid. There are two important caveats:
   - **a.** If the bonds are being used to fund a child's education, the bonds cannot be owned by the child. This is a strange rule, but it means that if a student's parent, guardian, or relative owns the bond, cashes it in, and then uses the money to help the student, neither the student nor the original bondholder will owe tax.
   - **b.** Students using the bonds for their own education must be at least 24 years old when the bonds are issued.

   The interest earned can also be tax-deferred. No matter what the earnings are used for, no taxes will be paid on the interest until the savings bonds are redeemed for cash.

Limitations of U.S. Savings Bonds

Although there are meaningful benefits associated with owning U.S. savings bonds, there are also some important restrictions:

HELPFUL HINT

This restriction makes U.S. savings bonds a poor investment choice for most emergency funds.

- Once you purchase a savings bond, you cannot cash in the bond for at least a year (see **Helpful Hint**).
- If you cash in your savings bond after the first year but before 5 years of ownership, then you will forfeit the last 3 months of interest earned on the bond. This penalty is similar to the early withdrawal penalty for a certificate of deposit (CD).

Types of U.S. Savings Bonds

There are two types of U.S. savings bonds available for purchase: EE bonds and I bonds. **Illustration 7.5.3** provides a comparison of these two bonds.

EE bonds have a fixed interest rate payable for up to 30 years. **I bonds** have a variable interest rate that adjusts semiannually based on inflation. Both EE and I bonds can be purchased for as little as $25. An I bond can also be purchased directly using an income tax refund in $50 increments.

ILLUSTRATION 7.5.3

EE and I Savings Bonds Compared

Bond Features	Series EE Savings Bonds	Series I Savings Bonds
Minimum investment	$25	$25 ($50 if purchased using a tax refund)
Maturity (stops earning interest)	30 years	30 years
Interest rate	Fixed	Variable based on inflation

The variable interest rate for I bonds is based on two parts:

1. A fixed interest rate.
2. An inflation rate that is based on the Consumer Price Index for urban residents. The **Consumer Price Index (CPI)** measures the change in the price of consumer goods and services over time.

Because part of an I bond's interest rate increases when inflation increases, your purchasing power is protected. This means that the total interest earned on the I bond will always be more than inflation over the long run (see **Helpful Hint**).

HELPFUL HINT

If you think that inflation will be high in the future, an I bond can be a prudent investment if you are looking for an ultra-low-risk asset.

Purchasing and Redeeming U.S. Savings Bonds

Before 2012, you could purchase a U.S. savings bond from participating banks or credit unions. This is no longer possible, which helps explain why savings bonds are not as popular as they used to be. Today, as shown in **Illustration 7.5.4**, there are now basically three ways to buy a U.S. savings bond.

1. Directly from the U.S. Treasury Department.
2. Directly with your federal income tax return.
3. Through payroll deductions.

ILLUSTRATION 7.5.4 **Options for Purchasing U.S. Savings Bonds**

Option 1	Option 2	Option 3
Directly from the Treasury Department	**Directly with your federal income tax refund**	**Through payroll deductions**
• $25 minimum • Electronic record	• $50 minimum • Paper bond	• $25 minimum • Electronic record

Purchasing from the U.S. Treasury Department

To purchase from the U.S. Treasury Department, follow these steps:

1. Set up an account through the Treasury Direct portal on the U.S. Treasury Department website.
2. Savings bonds sold through Treasury Direct require a minimum amount of $25.
3. When you purchase savings bonds using this method, the Treasury Department will send you an electronic record and reference number; these bonds are paperless.

When you are ready to cash in the bond (at least 1 year after purchase), you may redeem the bond using your Treasury Direct account.

Purchasing with Your Federal Income Tax Refund

You can use your federal income tax refund to automatically purchase I bonds (minimum investment is $50). Here's how the process works.

1. Use Form 8888 when you file your federal tax return.
2. You will receive the actual paper I bonds in the mail 4 to 6 weeks after filing your tax return.

   When you are ready to cash in the bond, you may redeem it in one of two ways:

- Log into your Treasury Direct account and follow the redemption procedure. This approach is easy, safe, and quick.
- Mail the paper bonds to the Treasury Securities Sales location in Minneapolis. Redeeming savings bonds this way is also safe, but the process is much slower.

Purchasing Through Payroll Deductions

This alternative requires that you establish a Treasury Direct account and set up a Payroll Services plan. This option is only available from employers that offer direct-deposit to multiple accounts. Employers who currently do not offer this option might be willing to if asked. When it comes time to redeem bonds purchased through payroll deductions, the easiest and fastest way involves the use of your Treasury Direct account.

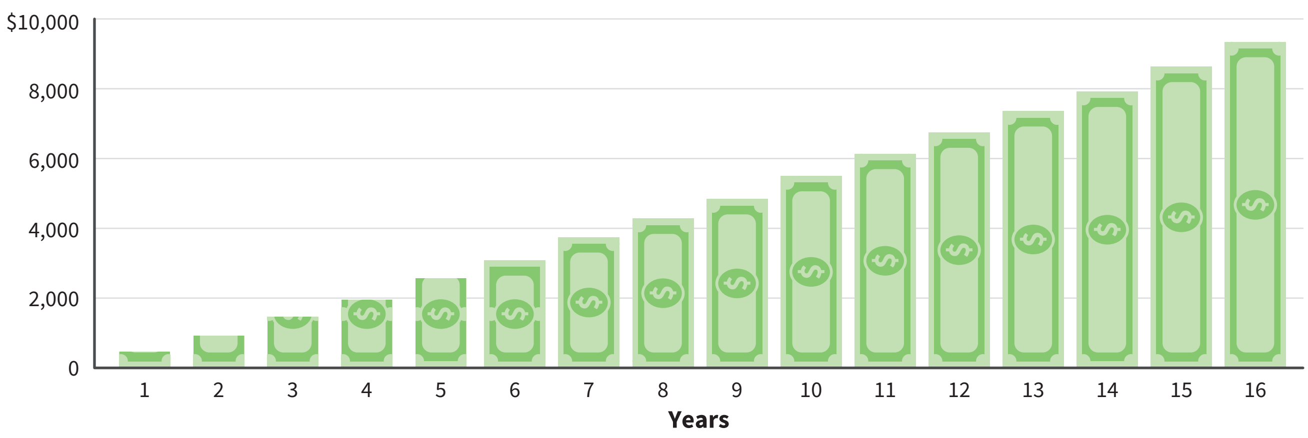
The Long-Term Value of U.S. Savings Bonds

Let's look at the long-term benefit of using a tax refund to buy U.S. savings bonds. Say a married couple has two young children, and they decide to purchase one $500 I bond for each child.

- The couple will receive a $2,000 refundable tax credit for each child claimed younger than age 17 on their tax return. In this scenario, the couple uses one-quarter of the refundable credit from each child to purchase a bond.
- They can easily purchase the I bonds in their children's names by filing Form 8888 with their tax return.
- Because the process is so easy, the couple really did not miss the cash from the refund. As a result, they decide to buy a $500 bond for each child every year at tax time.

Illustration 7.5.5 shows how much will be available for each child after 16 years (the child tax credit stops after age 16) if the average annual interest rate earned is 1.96%, which is the

ILLUSTRATION 7.5.5 **Value of a $500 Annual I Bond after 16 Years, Compounded Annually at 1.96%**



approximate return on I bonds. With hardly any hassle at all, each child will have $9,291 available to help pay for college expenses or other needs in the future (see **Helpful Hint**).

When it comes time to use the money, redemption is easy. The bonds can be cashed in at the Treasury Retail Securities location in Minneapolis. When the children graduate high school and are preparing to go to college, they will be very grateful for their parents' wisdom in purchasing I bonds with tax refunds.

HELPFUL HINT

Because the I bonds were purchased with a tax refund, the bonds will be delivered in the mail. It will be important for the couple to keep the paper bonds in a safe, secure place. However, if the bonds are lost or stolen, the Treasury Department will replace the bonds for free and without penalty.

Concepts in Action

Joseph and Stephanie are a married couple with two young boys. Joseph is in school and works part-time. Stephanie is also attending school through online classes and works part-time as well. Together, their gross household income was $24,000 this past year. Although their income is modest, Joseph and Stephanie have figured out how to get by each month on their earnings. At tax time, they determine that they will receive a $5,400 tax refund. They are very excited.

Knowing firsthand how hard it is to go to school and work, Joseph and Stephanie want to save some money for their sons' college education. Joseph and Stephanie also know that if they have their tax refund deposited into their savings account—with the intent of opening a savings account for their two young boys—they will likely just spend the money instead. Describe some of the reasons why Joseph and Stephanie should purchase I bonds with their tax refund.

Solution

The bonds can be purchased in their boys' names, and that way Joseph and Stephanie will be less tempted to spend the money. Even though the boys or the parents may then need to pay taxes on the proceeds later, at least the money will be there for the children when needed. Also, because they cannot cash in the bonds for at least 12 months from the date of purchase, this will further deter Joseph and Stephanie from spending the money.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following is *false* in relation to U.S. savings bonds?
   - **a.** Interest earned is received on a tax-free basis at the federal level.
   - **b.** U.S. savings bonds should not be used to hold the majority of a person's emergency fund assets.
   - **c.** Interest earned is received on a tax-free basis at the state level.
   - **d.** Interest earned is received on a tax-free basis at both the federal and state levels.

2. Which of the following statements regarding the taxation of U.S. savings bonds is *correct*?
   - **a.** Interest on I bonds is not taxable but interest on EE bonds is taxable.
   - **b.** Interest on I bonds and EE bonds is taxed by the federal government when the bonds are redeemed.
   - **c.** If savings bonds' proceeds are used to pay for qualifying higher education expenses, such as college tuition and fees, the interest is only taxed by the state government and not the federal government.
   - **d.** Interest on I bonds and EE bonds is not taxed by the federal government.

3. **Calculate** Mike pays taxes at the 12% federal income tax bracket level. His state also has a 6% tax on investment income, including interest earned. If Mike were to cash in a U.S. savings bond for $300, which he originally purchased for $100, how much will he pay in federal and state taxes?
   - **a.** $15.
   - **b.** $24.
   - **c.** $45.
   - **d.** $63.

4. Tyler is 18 years old. He has $3,000 worth of EE bonds in his name. He received the bonds as gifts over the years. He is hoping to cash in the bonds and use the proceeds for college. Which of the following statements is *true* in relation to his goal?

  a. Because he is using the bonds for college, he will not owe taxes when the bonds are redeemed.

  b. Because he is younger than age 24 and single, he will not owe taxes when the bonds are redeemed.

  c. Because he is younger than age 24, he will need to pay taxes on the interest earned when the bonds are redeemed.

  d. Because he received the bonds as a gift, he must pay taxes on the full amount of the redemption.

5. **Calculate** Assume Jasmine has owned an EE bond for 3 years. If the fixed rate of interest is 2%, how much must she report in interest income each year she owns the bond?

  a. $10.

  b. $20.

  c. $122.

  d. $0.

6. **Calculate** Assume Jasmine has owned an EE bond for 3 years. The fixed rate of interest is 2% and the current value of the bond is $2,000. If Jasmine were to cash in the bond tomorrow, how much interest will she lose (approximately) as a penalty?

  a. $0.

  b. $10.

  c. $20.

  d. $40.

7. Linda likes the idea of using a portion of her federal income tax refund to purchase a U.S. savings bond. Which of the following statements is *true* regarding this investment possibility?

  I. The minimum investment for an EE bond is $50 using her tax return.

  II. The minimum investment for an EE bond is $25 using her tax return.

  III. The minimum investment for an I bond is $50 using her tax return.

  a. I only.

  b. III only.

  c. I and III only.

  d. II and III only.

8. **Calculate** If Haley can obtain a 2.5% annual yield on a single $500 EE bond, how much will the bond be worth after 30 years (round your answer)?

  a. $985.

  b. $1,049.

  c. $15,375.

  d. $21,951.

9. **Calculate** How long will it take for Sancho to double his investment if he purchases a U.S. savings bond that yields 3.30% annually (round your answer to the nearest year)?

  a. Never.

  b. 17 years.

  c. 22 years.

  d. 30 years.

10. How can Karina redeem a U.S. savings bond?

  a. Cash in the bond at a local bank or credit union.

  b. Cash in the bond with her employer if the employer offers U.S. savings bonds as an employee benefit.

  c. Cash in the bond when filing her federal income taxes.

  d. Cash in the bond at a local bank, when filing her federal income taxes, or with an employer who offers U.S. savings bonds as an employee benefit.

Adventures in Personal Finance

Short Answer

1. What are some benefits and restrictions of using U.S. savings bonds to achieve long-term financial goals?
2. **Calculate** With EE bonds currently yielding less than 2%, will an investor ever be able to double his or her money with this investment?
3. Some believe that holding U.S. savings bonds offer investors little advantage. Explain who might be willing to forego higher yields for the safety of these bonds.
4. If you were to purchase a U.S. savings bond, would you purchase an I bond or an EE bond? Explain your reasoning and be sure to comment on the advantages and disadvantages associated with each type of bond.

Explore

1. Visit the Treasury Direct website and find out the current fixed rate for EE bonds and the current variable interest rate for I bonds.
2. If you were planning to purchase U.S. savings bonds for your child's education, you need to know the best way to register, or record, ownership of the bond. Visit the Treasury Direct website and search "savings

bonds education." Read through the search results to learn the best way to title the ownership of savings bonds to finance education. Based on your research, write a brief summary of how you or someone else should title savings bonds if they are going to be used to pay for a child's education.

Expanded Learning Activity

Calculate The following lists historical yields for U.S. savings bonds between 2005 and 2016.

Interest Reset Period	EE Bonds	I Bonds
May 2016	0.10%	0.26%
November 2015	0.10%	0.26%
May 2015	0.30%	0.16%
November 2014	0.10%	0.16%
May 2014	0.50%	0.26%
November 2013	0.10%	0.36%
May 2013	0.20%	0.16%
November 2012	0.20%	0.16%
May 2012	0.60%	0.16%
November 2011	0.60%	0.16%
May 2011	1.10%	0.16%
November 2010	0.60%	0.16%
May 2010	1.40%	0.36%
November 2009	1.20%	0.46%
May 2009	0.70%	0.26%
November 2008	1.30%	0.86%
May 2008	1.40%	0.16%
November 2007	3.00%	1.36%
May 2007	3.40%	1.46%
November 2006	3.60%	1.56%
May 2006	3.70%	1.56%
November 2005	3.20%	1.16%
May 2005	3.50%	1.36%

Calculate the average yield for both bonds over the time period. Which bond—EE or I—generated the highest yield over the time period? What helps explain this result? Going forward, what might change which bond provides investors with a higher yield?

Custodial Accounts and Asset Ownership for Minors

LO 7.6 Discuss the different types of custodial and beneficiary accounts and their appropriate uses.

Along your lifetime financial journey, you'll often find that you will run across information that doesn't seem to pertain to you. For example, if you aren't planning to buy a house for 10 years, do you really need to understand mortgage rates right now? The answer is *yes*. The more informed you are today, the better position you'll be in later to make wise financial decisions.

The same is true concerning property ownership for minors. The financial system is not set up to allow minors to own assets directly. But even if you are older than age 18, this is an issue you need to keep in mind, especially if you have or plan to have children. Let's talk about property ownership issues and the process of establishing accounts for children.

Property Ownership as a Minor

To those younger than age 18 (**minors**), it may seem like the financial world is stacked against young people. In some ways, the laws and customs surrounding money and the ownership of property are, in fact, unfair. It is important to set the record straight.

- Minors are allowed, under law, to own property and assets.
- They just must be supervised.

Let's say that Raul, who is 12 years old, receives $20 from his grandmother as a birthday gift. The money is his, although his parents can require him to save some or all of it. The same is true if Raul gets a part-time job when he reaches age 16. He can earn money from working, but a parent or guardian is allowed to guide his use of the earnings.

Why Minors Generally Do Not Own Property

Financial institutions, such as banks and brokerages, are reluctant to open accounts for those who are considered a minor. The reason is simple:

- A minor is generally exempt from binding clauses in contracts.
- This means that anyone who has yet to reach the age of majority (18 years in most cases) can change his or her mind on a transaction or trade after the deal is done.

For example, say Graham, age 15, buys a 3-year certificate of deposit (CD) with an APY of 2%. Later in the week, the same bank offers a new 3-year CD with an APY of 5%. Graham may cancel the first CD and buy the second one without penalty because he is a minor. If Graham were age 25, he would first need to pay a penalty for canceling the original CD purchase.

Although financial institutions are generally reluctant to open accounts for minors, some credit unions go out of their way to encourage young people to establish accounts. They often even help young people establish credit by offering small-limit credit cards tied to bank accounts.

How Minors Generally Can Own Property

Because minors are generally held to a different legal contract standard than adults, it makes dealing *directly* with a minor a very risky proposition in the marketplace, whether involving financial assets, real estate, or even cars. However, minors can own titled assets (such as savings, investments, and real estate) *indirectly* through a **custodial account** as follows:

- Assets can be given, transferred, or owned by a minor using the **Uniform Gifts to Minors Act (UGMA)** or **Uniform Transfers to Minors Act (UTMA)** custodial account, depending

on individual state laws. UGMAs are used for bank accounts, investments, and insurance policies. UTMAs can be used to hold any type of property, including real estate.

- Minors may also own **custodial IRA accounts**, either as a Roth or traditional IRA. Custodial IRA accounts have the same requirements as regular IRA accounts but simply allow minors to begin building their long-term savings (see **Helpful Hint**).
- The "adult" custodian may withdraw money as well, although the law states that the custodian must use the money only for the minor's welfare. As a result, a minor should only open an account with a trusted adult.

HELPFUL HINT

The custodian rules mean that an adult (such as a parent, guardian, or other relative) will need to be shown on the account as a custodian.

The minimum age (or age of majority) at which a custodial account can be converted to an individual account depends on state laws. Married people are considered to be **emancipated**, which means that they are no longer considered a minor. **Illustration 7.6.1** shows the minimum age at which a custodial account may be converted to an individual account. There is no universal age. It depends on the state in which you live.

ILLUSTRATION 7.6.1 Minimum Age at Which a Custodial Account May Be Converted to an Individual Account

State	UGMA Age of Majority	UTMA Age of Majority	State	UGMA Age of Majority	UTMA Age of Majority
Alabama	19	21	Missouri	21	21
Alaska	18	21	Montana	18	21
Arizona	18	21	Nebraska	19	21
Arkansas	21	21	Nevada	18	18
California	18	18	New Hampshire	21	21
Colorado	21	21	New Jersey	21	21
Connecticut	21	21	New Mexico	18	21
Delaware	18	21	New York	18	21
DC	18	18	North Carolina	18	21
Florida	18	21	North Dakota	18	21
Georgia	21	21	Ohio	18	21
Hawaii	18	21	Oklahoma	21	18
Idaho	18	21	Oregon	21	21
Illinois	21	21	Pennsylvania	21	21
Indiana	18	21	Rhode Island	21	21
Iowa	21	21	South Carolina	21	DNR*
Kansas	18	21	South Dakota	18	18
Kentucky	21	18	Tennessee	18	21
Louisiana	18	18	Texas	18	21
Maine	21	18	Utah	21	21
Maryland	18	21	Vermont	18	DNR*
Massachusetts	18	21	Virginia	18	18
Michigan	18	18	Washington	21	21
Minnesota	18	21	West Virginia	18	21
Mississippi	21	21	Wisconsin	18	21
			Wyoming	18	21

* Does not recognize.

Source: Social Security Administration (secure.ssa.gov/poms.nsf/Lnx/0501120205BOS).

Financial Benefits of Transferring Assets to Minors

Although property laws may seem unfair from the point of view of minors, this legal bias is designed to protect young people. For example, as we just discussed, any asset held in a custodial account must be managed by the custodian adult for the full benefit of the child. If a custodian were to steal money from an account or make hasty decisions concerning the assets, the custodian could be held liable. If a bad investment is made in good faith or if a child is given permission to use an asset unwisely, then the adult can face legal consequences. In any case, the assets held in the UGMA or UTMA belong to the child. We will discuss the tax advantages of transferring assets to minors next.

Taxation of Custodial and Beneficiary Accounts

Tax implications differ depending on the type of custodial account.

- Earnings from investments in UGMA and UTMA accounts are taxable in the year earned. The minor who owns the account is responsible for paying the tax on those earnings. (In some cases, the child may be very young and obviously the parents will be responsible for filing the child's tax return to report the earnings.) The money can also be freely withdrawn for the benefit of the minor at any time.
- In contrast, custodial IRA accounts enjoy the benefits of tax-deferred growth. In exchange for this tax benefit, withdrawals from IRA accounts must meet certain requirements or the distributions become subject to a 10% early withdrawal penalty (see **Helpful Hint**).

HELPFUL HINT

Keep in mind that, as with all types of IRAs, the minor must have earned income to establish an IRA.

Tax-Planning Benefits of Transferring Assets to Minors

Nearly all custodial accounts are created through gifts or transfers from an adult to a child. For example, Abed's grandmother owns stock that she wants to give to Abed. The best way to make the gift is through a custodial account transfer. There are two advantages associated with this type of transfer from the grandmother's perspective.

1. By placing the stock into the UGMA or UTMA, Abed must wait until age 18, 19, or 21 (depending on the state where he lives) before he can gain access to the stock. This helps reduce his grandmother's fear that Abed might make poor financial decisions with the gift. You've probably heard stories of a young person getting a lot of money and then spending everything quickly. The use of the UGMA and UTMA accounts ensures that the account beneficiary will be a bit older, and hopefully wiser and more mature, before "owning" the asset. However, there is still a risk that the child may not be mature enough to manage the money when she or he becomes the sole owner of the account.
2. There are significant tax advantages for Abed's grandmother.
   a. Making the gift now can save Abed's grandmother capital gains tax in the future. If she were to sell the stock first and give Abed the money, she might need to pay tax on the sale. If Abed's grandmother instead were to wait a few years and then sell the stock, she could end up paying even more in taxes if the value of the stock continues to increase.
   b. Abed's grandmother will receive an income tax benefit. If she earned $1,000 in dividends from the stock, her tax rate on those dividends could be as high as 20%. Abed likely has a much lower marginal tax rate than his grandmother. Abed's tax rate could be as low as 0% on those same dividends.

Some people have tried to take advantage of these tax benefits by using custodial accounts to shelter income. This strategy involved moving income-producing properties into the name of children who were in lower tax brackets. Congress, working with the Internal Revenue Service, stepped in and put restrictions on this type of financial planning by imposing a kiddie tax.

- The **kiddie tax** allows only a small amount of unearned income to be taxed at a child's marginal tax bracket (see **Helpful Hint**).
- In Abed's example, the stock may pay a dividend (a dividend is considered to be unearned income). If that dividend is significant (larger than $2,100 in 2018), then Abed will have to pay higher tax rates on some of that investment income.

HELPFUL HINT

Recall that unearned income includes interest, dividends, rents, and other forms of income that come from savings and interest.

- However, as long as Abed's unearned income is less than $2,100 (adjusted annually for inflation), gifting assets through UGMA accounts can be a very effective way to avoid higher tax rates on income.

You might be asking yourself why Abed's grandmother did not put the money in a custodial IRA account to avoid the kiddie tax. Custodial IRAs do avoid the kiddie tax because of the tax-deferral benefits. However, recall that to contribute money to a custodial IRA account, the owner (child) must have earned income equal to or greater than the amount contributed. Also, only cash can be contributed to IRAs, making a direct stock transfer impossible.

Other Beneficiary Accounts

Many transfers to minors are given with the intent of providing financial support for a child's college education. However, with an UGMA or UTMA account, if the child decides not to attend college, he or she still gets the money to use for whatever purpose he or she chooses. To address this risk—at least from a parent's point of view—and encourage parents and other family members to save for a child's education, Congress passed legislation introducing college savings plans.

College savings plans are specific types of accounts set up by states that allow individuals to set money aside for a designated beneficiary's higher education expenses. College savings plans provide:

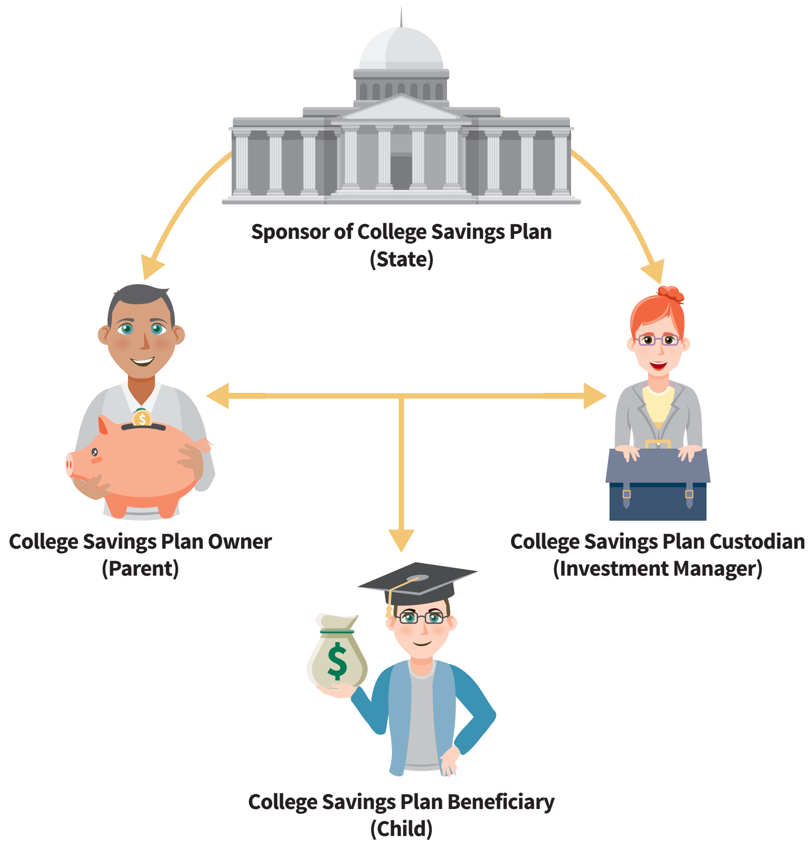
- Tax-deferred growth on earnings.
- Tax-free distributions if the money is used for qualified educational expenses such as tuition, fees, books, equipment, housing, meal plans, and other necessary expenses.

If money is withdrawn from one of these accounts and used for nonqualified educational expenses, then the distributed earnings will be included as taxable income and may be subject to an additional 10% penalty tax. The beneficiary is responsible for any tax due on the distributions from an account.

As shown in **Illustration 7.6.2**, the owner of a college savings plan can change the beneficiary of an account at any time by notifying the plan custodian. College savings plans, such as

ILLUSTRATION 7.6.2

Structure of College Savings Plans



529 plans and **Qualified Tuition Programs**, are popular with many parents and grandparents as these plans allow them to:

- Save for their children's or grandchildren's education on a tax-deferred basis.
- Enjoy tax-free distributions.
- Remain in control of the money so that funds can only be used for college expenses.

Let's revisit Abed and his grandmother's situation. Abed's grandmother may want to consider a college savings plan for Abed if her intention is to support his college education expenses. She can open a 529 plan, make a contribution, name Abed as the beneficiary, and then choose the investments within the account. She will know that the money will be used to help Abed pay for college.

Concepts in Action

Susan is 17 and works part-time. She would like to start saving and investing for her future. However, when she went to her local bank to set up an account, the bank manager told her she was a minor and could not set up her own checking account. What are Susan's options?

Solution

Susan will need to get a trusted adult, most likely one of her parents, to come with her to open the account. The account will most likely be set up as an UGMA account. The account will still function the same as other accounts, but Susan's parent or guardian will also be shown as an account owner. Susan could also explore a custodial IRA—either a traditional or Roth IRA—but again, she would need a trusted adult to open the account with her (the amount of the IRA contribution will be limited to her earnings).

End-of-Topic Assessment

Multiple-Choice Questions

1. Why are investment companies and banks reluctant to open accounts for minors?
   - **a.** Minors cannot legally contract.
   - **b.** Minors are typically bad investors.
   - **c.** Minors are unlikely to save much money.
   - **d.** Minors tend to take their money out once they reach legal age.
2. All of the following are true of custodial accounts, *except*:
   - **a.** custodial accounts represent a way parents can indefinitely control money they give to children.
   - **b.** minors can set up custodial accounts with a parent.
   - **c.** minors can set up custodial accounts with an older relative or friend.
   - **d.** custodians can withdraw money from a custodial account for the benefit of the minor.
3. In which of the following can UGMA accounts invest?
   - **I.** Real estate.
   - **II.** Mutual funds.
   - **III.** Bonds.
   - **a.** I only.
   - **b.** I and III only.
   - **c.** II and III only.
   - **d.** I, II, and III.
4. In which of the following can UTMA accounts invest?
   - **I.** Real estate.
   - **II.** Mutual funds.
   - **III.** Bonds.
   - **a.** I only.
   - **b.** I and III only.
   - **c.** II and III only.
   - **d.** I, II, and III.
5. Ji-Yung is 14 years old and a young entrepreneur. She is interested in investing some of her savings in real estate. She recently found a small house that she can rent out to college students. Her dad has agreed to the idea. Ji-Yung and her dad learned that the property will

need to be held in a custodial account until Ji-Yung turns 21. Which custodial account can be used in this situation?

a. UGMA.

b. UTMA.

c. Either UGMA or UTMA.

d. Neither UGMA nor UTMA.

6. The tax benefits of custodial accounts mean that:

a. earnings on investments in custodial accounts are tax-free.

b. all earnings on investments in custodial accounts are taxed at the custodian's tax rate.

c. the tax rate on the investment earnings could be as low as 0%.

d. earnings greater than $2,200 are protected.

7. Custodial IRAs, whether Roth IRAs or traditional IRAs, allow minors to:

a. begin saving for retirement prior to reaching age 16.

b. invest in long-term assets.

c. invest in bank CDs.

d. begin saving for retirement prior to reaching age 16, invest in long-term assets, and invest in bank CDs.

8. What are benefits of a custodial IRA?

a. It offers tax-deferred growth on investment earnings.

b. It allows minors to begin building their long-term savings.

c. It gives minors full control of the accumulated funds in the custodial IRA once they reach the age of majority.

d. It offers tax-deferred growth on investment earnings, allows minors to build long-term savings, and gives minors control of assets in the IRA once they reach the age of majority.

9. If parents are concerned their child may use money set aside for her or his college education unwisely, they could:

a. establish a custodial IRA to prevent premature withdrawals.

b. establish a custodial account in another child's name.

c. refuse to allow the minor to establish his or her own custodial account.

d. establish a 529 plan to maintain control of the funds gifted.

10. If a parent's intent is to save for their child's education, which savings product is best?

a. UTMA.

b. Savings account.

c. UGMA.

d. Qualified Tuition Program.

Adventures in Personal Finance

Short Answer

1. Why would a parent choose to use a 529 plan rather than a custodial account for college savings?

2. Describe why a bank would be reluctant to loan money to a minor to buy real estate, a car, or another expensive asset.

3. Explain how the kiddie tax rules might be advantageous to a young saver.

Explore

1. **Writing** Research in person or online at least five different financial institutions in your local community where you could establish a custodial account. Ask each institution to provide you with information about federal deposit insurance that is available for assets held in the account(s). Write a brief report of your findings, describing the similarities and differences between and among the institutions.

2. Would you recommend establishing a custodial account for a child? Why or why not?

Expanded Learning Activity

Presentation Definitions are an important element within UTMAs and UGMAs. According the **Social Security Administration**, any kind of property, real or personal, tangible or intangible, can be transferred to a custodian for the benefit of a minor under UTMA. UTMA covers not only outright gifts but also other transfers, such as payment of debts owed by a third party to a minor and transfers of property from trusts or estates. In some cases, the minor's own assets can be transferred to an UTMA. Under UGMA, only gifts of cash or securities are permitted. Conduct an Internet search to find definitions for the following UTMA/UGMA terms. Summarize your search and present your definitions in class.

- Donor.
- Custodian.
- Custodial property.
- Minor.
- Adult.
- Transfer.
- Irrevocable transfer.

Financial Frauds and Identity Theft

LO 7.7 Recognize financial frauds and the strategies to protect against them.

In this chapter, you have learned many ways to save money *for* your financial future. You must also save your money *from* those who seek to take it away.

You should never become complacent when it comes to protecting your money. Unfortunately, there are individuals and organizations that exist to perpetrate numerous types of financial frauds. As a result, even if you make the wisest financial decisions and keep your savings in insured accounts, you can lose some or all your financial assets to a scam artist if you are not careful. In this topic, we discuss how you can avoid being a financial victim.

Financial Frauds

HELPFUL HINT

Fraud is always unethical, improper, and in most situations illegal.

Fraud occurs whenever someone attempts to deceive you with a promise of goods, services, money, or other benefits that really do not exist, were never intended to be provided, or were misrepresented (see **Helpful Hint**). How common is financial fraud? The answer might shock you. One in every five Americans has been the victim of a financial crime. Older Americans are even more likely to be exploited financially.

Let's look next at three well-known financial frauds.

1. Ponzi schemes.
2. Pyramid schemes.
3. Telemarketing fraud.

Ponzi Schemes

HELPFUL HINT

A promise of low risk and high returns should warn you of a possible scam.

You might have heard of Bernie Madoff. An old joke says that "Bernie MADE OFF with his investor's money." Bernie ran the world's largest Ponzi scheme, in which investors collectively lost billions of dollars. As shown in **Illustration 7.7.1**, a **Ponzi scheme** promises investors and savers a low-risk, high rate of return, interest, or dividends (see **Helpful Hint**). Basically, this is how a Ponzi scheme works.

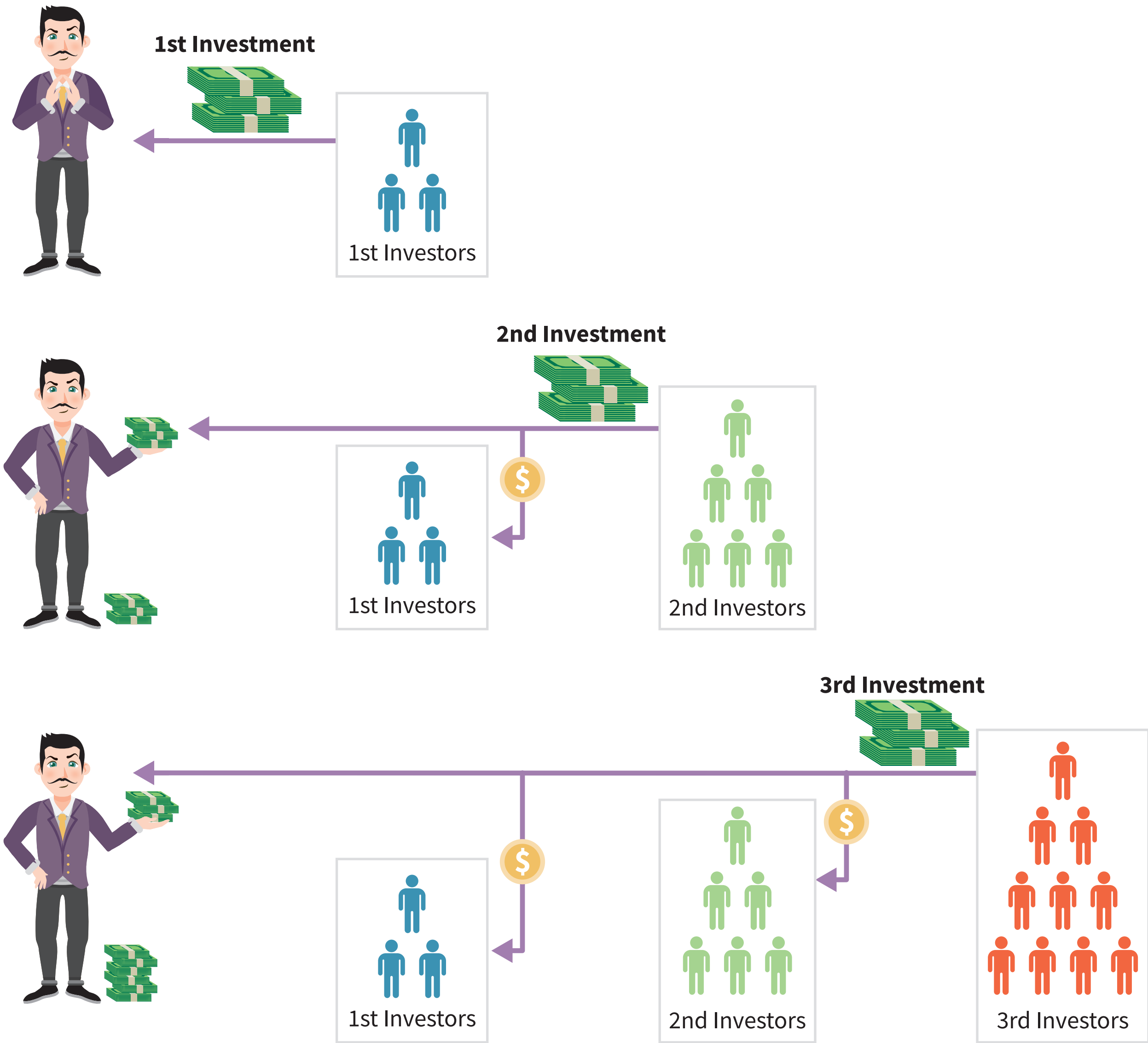
- The fraudsters pay early investors a rate of return (such as 10%) with money raised from people who invest later.
- The moment that some of the early investors demand all their money back or when no new investors can be found, the scheme falls apart.

Madoff seemed honest and promised investors a steady 10% rate of return. Although his scheme worked for years, investors lost billions of dollars when it all fell apart at the end.

Pyramid Schemes

Closely related to the Ponzi scheme are pyramid schemes. A **pyramid scheme** is a scam that is typically based on selling products or recruiting new members into an organization. Rather than promise a high rate of return like a Ponzi scheme, those who run pyramid schemes either promise high commissions on products sold or a sizable share of any

ILLUSTRATION 7.7.1 **The Basic Process of a Ponzi Scheme**

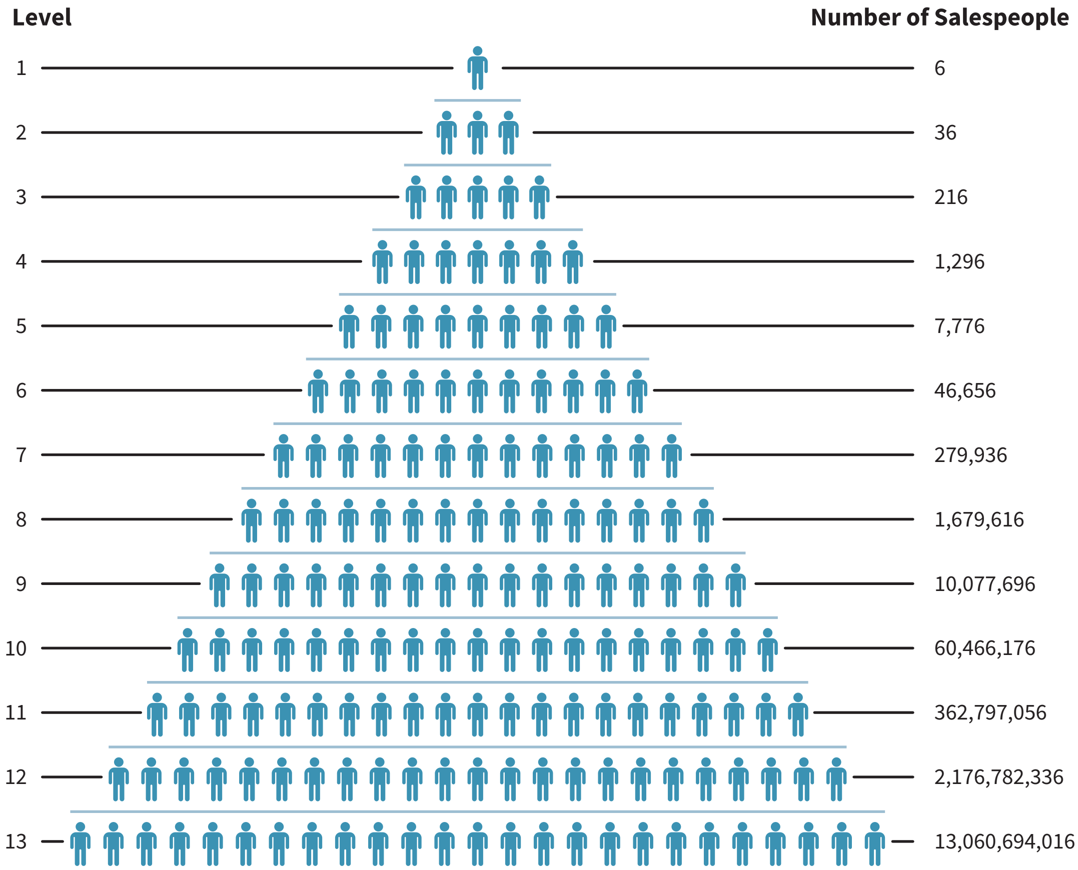


money paid by new members to join the organization. The pitch is that you may not earn very much money selling products but if you can grow your network, you can earn substantial money based on fees paid by those in your network, as well as from commissions generated by your network. The whole premise of a pyramid scheme is to continually recruit new network members. Pyramid schemes are quite lucrative to those on the top of the pyramid, but like all scams, later investors or network members usually end up losing as it becomes difficult to find new network members. Once the number of new participants declines, the pyramid crumbles.

Illustration 7.7.2 shows how even the best sounding pyramid schemes always fail.

- Imagine that a rip-off artist starts with six original salespeople.
- These six salespeople are then supposed to go out and find six new representatives each.
- Now, these new people are supposed to find another six salespeople, and so on.
- Soon, however, there just are not enough people left to keep the scam going. In this example, it takes only 13 cycles before every person in the world would be needed to keep the scam alive!

ILLUSTRATION 7.7.2 **A Simple Pyramid Scheme**



Telemarketing Fraud

Telemarketing fraud is also a huge problem in the United States. **Telemarketing fraud** occurs when a product or service is misrepresented in an unsolicited phone call, e-mail, or text message. A common line is as follows: "I am calling to inform you that you have won a free gift." The reality is that no one ever gives away something for free. Always assume that there is a catch to the story. Usually, the catch is that you will lose money.

Protecting Yourself from Financial Fraud

As you can imagine, there are thousands of financial frauds, rip-offs, and scams operating in the marketplace today. Here are a few tips to help you stay safe and keep your money working for you.

- Never buy something from an unfamiliar person or business over the phone or Internet.
- Always ask to receive written material before sending money or providing account information. If it is "time-limited," then you can guess the offer may be a rip-off.
- Never pay a processing fee to receive a prize.
- Never invest in something that you do not understand (this is true for legitimate investments as well).
- Do not believe that a rich relative you don't know has left you money and then pay to get the details.
- Never send money overseas to someone you do not know.

If you believe you are being targeted, report the possible fraud to the police and your state's attorney general's office. A good rule is to be skeptical whenever it comes to anything that might separate you from your money!

Identity Theft

Let's now turn our attention to identity theft. The U.S. Justice Department defines **identity theft** as a crime in which someone wrongfully obtains and uses your personal data in some way that involves fraud or deception for his or her economic gain. **Illustration 7.7.3** shows the most common forms of identity theft.

ILLUSTRATION 7.7.3

Common Forms of Identity Theft

Before 1998, identity theft was not considered to be a federal crime. This changed when news spread that a convicted felon had done the following:

- Stolen the identity of a man and ran up more than $100,000 in credit card debt.
- Obtained a mortgage for a new home.
- Purchased cars, boats, motorcycles, and guns in the man's name.

Worse still, the thief repeatedly called the man and his wife to taunt them. Although the thief was eventually caught, he only spent a short amount of time in jail for misrepresenting himself for the purchase of a gun. He never paid back the money he stole, nor did he spend a day in jail because of his theft!

The Facts of Identity Theft

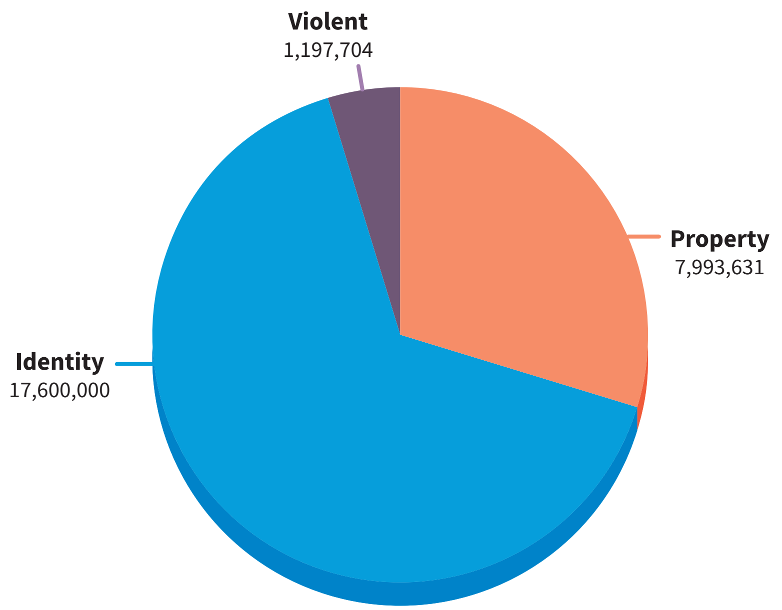
Fortunately, state and federal laws now recognize identity theft as a crime. However, just because identity theft is illegal does not mean that the occurrence of identity theft has declined. In fact, the opposite is true. Consider the following statistics from the U.S. Department of Justice:

- Nearly 18 million households have had at least one person age 12 or older experience identity theft.
- More than 35% of all households in the United States have experienced misuse or theft from a bank, savings, or utility account (e.g., electricity or water).
- The total loss associated with identity theft exceeds $13 billion per year.

As shown in **Illustration 7.7.4**, the number of identify thefts in the United States is greater than the number of reported violent and property crimes combined!

ILLUSTRATION 7.7.4

Number of Crimes Reported



Source: Department of Justice (2015).

The really bad news is that law enforcement agencies are not equipped to help most people who experience identity theft. Usually, the amount stolen is considered too low, or it is nearly impossible to find the thief.

How does identify theft happen? Thieves can steal your identity in a number of ways.

- Stealing your wallet or purse.
- Going through your garbage looking for receipts and credit card offers.
- Hacking into your credit card or bank account.

Sometimes, people innocently give thieves their account numbers and passwords by responding to bogus e-mails or phone calls.

Protecting Yourself from Identity Theft

It is up to you to protect yourself from being an identity theft victim. Here is what the **Federal Bureau of Investigation (FBI)** recommends to avoid being an identity theft victim.

- Never throw away ATM receipts, credit statements, credit cards, or bank statements; always shred or destroy these documents.
- Never (*ever*) give your credit card number over the telephone unless you made the call.
- Do not respond (*ever*) to a **phishing scheme**—an unsolicited e-mail asking you to provide personal information (such as your Social Security number) or confirm the details of a credit account. You will know if someone is attempting a phishing scheme if you receive any e-mail with a statement such as the ones shown in **Illustration 7.7.5**.

ILLUSTRATION 7.7.5

Examples of Phishing Scheme E-Mails

"We suspect an unauthorized transaction on your account. To ensure that your account is not compromised, please click the link below and confirm your identity."

"During our regular verification of accounts, we couldn't verify your information. Please click here to update and verify your information."

"Our records indicate that your account was overcharged. You must call us within 7 days to receive your refund."

- Always reconcile your bank accounts monthly and report any problems to your bank or creditor immediately. Further, keep a list of all your credit cards, debit cards, and each account's contact information somewhere secure, such as a safe deposit box.
- Obtain a copy of your credit report annually and report anything unusual right away.

You should also take preemptive action by doing a **credit freeze**. Freezing your credit seals your credit reports so that no new accounts can be opened unless you unfreeze the account using a personal identification number (PIN) (see **Helpful Hint**).

HELPFUL HINT

Freezing your accounts will not negatively affect your credit score, and the small fee charged by the credit bureaus (about $3 to $15) is well worth the cost.

If you suspect that you have been a victim of identity theft, take the following steps.

1. Contact your local police or sheriff department.
2. Alert your credit card company or financial institution.
3. Check with your insurance agent. Some homeowner's and renter's insurance policies include coverage for a stolen identity or financial frauds.

As you progress in your lifetime financial journey, it is important to keep an eye out for people and organizations that intend to push you off-track. Frauds and rip-offs, for the most part, can be avoided. Being diligent in protecting your identity and cautious with your financial records is a good way to stay focused on reaching your long-term financial goals.

Concepts in Action

Zoe, your friend from class, is a full-time student who also works 20 to 30 hours per week to pay as much of her schooling costs as possible. She then takes out student loans to cover the remaining expenses. Zoe recently received a phone call informing her that she has been selected for a student loan forgiveness program. Zoe tells you that she is so excited because the person on the phone told her that she would only need to pay a one-time enrollment fee of $999. After that, Zoe would simply need to fax her transcript, with her Social Security number, and her student loan balance would be reduced by $2,500 for every A that she received going forward. Zoe is so excited because she is a good student and this will give her some extra motivation to get straight A's. What should you tell Zoe?

Solution

This sounds like a definite scam. Before Zoe sends any money or gives out her personal information, she should ask to receive written material about the company and this program and the phone number she can use to call them back. Zoe should also then check the company's rating with the **Better Business Bureau** or **Chamber of Commerce**, or investigate the company using an Internet search.

Typically, scammers won't give you time to think about the decision, so for Zoe it might be too late if she already gave them her credit card or other information over the phone to sign up. Legitimate companies will give you time to think about it and call them back on a number that you request. Regardless, Zoe should immediately notify the authorities if she discovers that this is a scam.

End-of-Topic Assessment

Multiple-Choice Questions

1. What occurs when you are deceived into believing that you will receive something that does not actually exist?

- **a.** Pyramid scheme.
- **b.** Ponzi scheme.
- **c.** Fraud.
- **d.** Theft.

2. Bart has been a successful financial advisor for more than 10 years. During that time, he has generated returns that have never been less than 5% annually. He does not advertise but that has not stopped investors from opening new accounts with his firm. It turns out that Bart has been taking the deposits of new investors, keeping a portion for himself, and sending the rest to earlier investors. Bart is running a(n):

- **a.** pyramid scheme.
- **b.** Ponzi scheme.
- **c.** telemarketing scheme.
- **d.** identity theft fraud.

3. Which of the following is an indication of a fraud?

- **a.** Hearing an investment advisor claim that he has consistently earned 15% annually for his clients over the last 10 years.
- **b.** Learning that a bank is offering a 2% yield on 3-year certificates of deposit.
- **c.** Listening to a stockbroker tell you that she believes the value of stocks is too high and that you should buy bonds.
- **d.** Receiving a promotional letter from an investment advisor saying that the advisor can match the return of the stock market.

4. A fraud that entails recruiting new members to sell products or services and to also recruit additional new members is called a(n):

- **a.** telemarketing fraud.
- **b.** Ponzi scheme.
- **c.** pyramid scheme.
- **d.** identity theft.

5. Which of the following statements indicates a possible fraud?

- **I.** Fill out this e-mail survey to receive a free gift.
- **II.** Be one of the first 30 callers to receive three days and two nights at a famous Las Vegas hotel.
- **III.** Your wealthy uncle recently died; send $250 to obtain details about your inheritance.

- **a.** II only.
- **b.** III only.
- **c.** II and III only.
- **d.** I, II, and III.

6. One strategy to avoid prize scams from telemarketers is to:

- **a.** never pay anything to receive a free prize.
- **b.** always check your credit report at least twice a year.
- **c.** never give your credit card number out over the phone unless you initiated the phone call.
- **d.** never pay anything to receive a free prize and never give your credit card number out over the phone unless you initiated the phone call.

7. Which one of the following statements regarding identity theft is *incorrect*?

- **a.** Identify theft results in losses of more than $13 billion per year.
- **b.** The occurrence of identity theft has decreased dramatically since it was designated as a federal crime.
- **c.** Little can be done by individuals to stop identify theft from occurring.
- **d.** More than one-third of households have experienced some form of identity theft.

8. Which of the following is *not* a strategy to protect against identity theft?

- **a.** Never respond to unsolicited e-mails asking for credit cards, passwords, or other financial or security information.
- **b.** Always shred financial statements and receipts that show account-related information.
- **c.** Reconcile your monthly account information to make sure there are not any unauthorized transactions.
- **d.** Never use credit cards online since nearly all identity theft occurs online.

9. How might someone gain information about you to commit identity theft?

- **I.** Going through your garbage looking for personal information.
- **II.** Sending a phishing e-mail to obtain personal information.
- **III.** Stealing your wallet or purse.

- **a.** III only.
- **b.** I and II only.
- **c.** II and III only.
- **d.** I, II, and III.

10. A(n) _______ seals your credit reports so that _______ cannot be opened.

- **a.** fraud alert; credit cards
- **b.** credit hold; credit reports
- **c.** credit freeze; new accounts
- **d.** account password; unauthorized accounts

Adventures in Personal Finance

Short Answer

1. **Calculate** The population of the United States is approximately 350,000,000 people. How many cycles will it take for a Ponzi scheme to fail if the fraud starts with 7 people who are then expected to recruit another 7 people, with the same growth occurring at each step of the cycle?

2. Why do some people become victims of fraud?

3. How might you make sure a credit card is never issued in your name without your permission?

4. For each of the following three statements, identify those that indicate you might be a target of a financial scam and explain why.
   a. "This offer is only good for the next 6 hours."
   b. "We have returned 10% to investors year-in and year-out with very little investment risk."
   c. "Although you can certainly wait to receive a written confirmation, which I am happy to send, you will get the best deal if you act today."

Explore

1. The **Consumer Finance Protection Bureau** website provides information on identity theft and ways to stop it. One of its recommendations is using a credit monitoring service (a company that monitors your credit report and other public records for identity theft). Research at least two credit monitoring services. What are the pros and cons of credit monitoring services?
2. **Writing** **Presentation** Visit the **FBI** website and search for senior financial fraud links. Use the information provided to write a one-page report on the key issues those older than age 65 face in relation to financial scams, rip-offs, and fraud. Be sure to include tips, tools, and techniques that seniors can use to avoid being a victim of a financial crime. Share your results with your class and, if appropriate, share your report with relatives and neighbors.
3. **Writing** **Presentation** You might be wondering how the Ponzi scheme got its name. It turns out the name for this fraudulent behavior comes from the man who originated the idea, Charles Ponzi. Research why and how Charles Ponzi enacted his fraudulent scheme and then write a brief report, being sure to cite all your references, and present your findings to your class.

Expanded Learning Activity

Writing **Presentation** The **Internal Revenue Service (IRS)** has recently reported an uptick in the number of criminals attempting to steal identities using a combination of e-mail and text-message phishing strategies. When an unsuspecting taxpayer clicks on the link provided, the person is directed to a malicious website. What makes this fraud even more dangerous is that the scammer's true e-mail address is masked as a legitimate IRS account, such as irs@service.govdelivery.com. Visit the IRS website and determine what you can do to avoid being a victim of this type of scam. Write the results of your review in a brief paper. Be sure to inform others in class about the legitimate ways that the IRS initiates contact with taxpayers and requests personal or financial information.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

7.1 Describe the relationship between investment risk and return. The relationship between risk and return is almost always positive. This means that the more return you want or need, the higher the risk you must be willing to take. Risk, in this context, can be conceptualized as the possibility of losing money. Sometimes, risk also refers to the volatility (uncertainty) of returns over time. In either case, those who are uncomfortable with the thought of losing money should gravitate toward lower-risk assets, such as savings accounts, money market savings accounts, and U.S. savings bonds.

7.2 Explain why an emergency fund is critical for financial well-being. Lack of preparation for pure risks can impede your short-term goals, as well as make it more difficult for you to reach your long-term financial goals. An emergency fund is money that is specifically set aside, in an easily accessible account, for the purpose of being available to address unexpected financial needs. The amount of money set aside in an emergency fund should be enough to cover several months of expenses. Your emergency fund ratio should be between 3 and 6. Financial plans that do not include emergency funds could be dramatically affected by unexpected financial scenarios, creating a domino effect throughout an individual's life.

7.3 Identify the use and benefits of savings accounts, money market savings accounts, and certificates of deposit. Savings accounts, money market savings accounts, and certificates of deposit are among the most secure and least volatile assets available to those seeking safety with their money. These assets are generally offered by banks and credit unions. As such, deposits are insured by the FDIC and NCUSIF up to $250,000 per depositor. Savings accounts tend to be the most flexible asset; however, savings accounts also pay the least interest. Money market savings accounts offer depositors more interest, but these accounts restrict the number of withdrawals someone can make in any given month. Money market savings accounts also generally require a higher initial deposit. Certificates of deposit (CDs) offer depositors more interest, but CDs require that the money remain on deposit for a set period of time. One drawback associated with CDs is that a penalty will typically be assessed if the CD is cashed out prior to maturity.

7.4 Explain how a Roth IRA provides savings and tax benefits. A Roth IRA is an account that almost anyone who has earned income can open and use to invest. Once the account is open, the owner can choose different investments to hold in the account. Most people use Roth IRAs solely to help save for retirement because these special investment accounts allow individuals to put money aside on an after-tax basis (no tax deduction). If the money is held until retirement, no taxes need to be paid. Another useful benefit of Roth IRAs is the ability to withdraw principal contributed to the Roth IRA for any purpose at any time without incurring any tax liability or penalty, which allows a Roth IRA to be used for emergency funds as well.

7.5 Describe the benefits and limitations of U.S. savings bonds. U.S. savings bonds represent small loans people make to the U.S. government. These assets are sold as either EE or I savings bonds. Most individuals purchase savings bonds directly from the U.S. Treasury. An EE savings bond provides the bondholder with a fixed interest rate that is paid for a maximum of 30 years. An I savings bond provides an interest rate that fluctuates over time based on inflation in the U.S. economy. Like EE savings bonds, I savings bonds pay interest for a maximum of 30 years. These assets are considered to be very safe, which also means that the level of interest earned is low. Similar to a certificate of deposit, if a savings bond is redeemed before 1 year, the bondholder will be penalized. If the bond is cashed in after 1 year but before 5 years, the bondholder will lose 3 months of interest. Because of these penalties, financial planners do not recommend savings bonds for those who are beginning an emergency savings fund.

7.6 Discuss the different types of custodial and beneficiary accounts and their appropriate uses. If you are young—younger than age 18 in most states—you are allowed, under law, to own property and assets but in accounts that are supervised. Minors typically own property through custodial accounts, such as Uniform Gifts to Minors Act, Uniform Transfers to Minors Act, and custodial IRA accounts. Additionally, other accounts, such as college savings plans (e.g., 529 plans) and trusts hold assets for the benefit of a minor child. There can be significant tax advantages for adults to transfer assets to minors.

7.7 Recognize financial frauds and the strategies to protect against them. Although the U.S. government provides bank and credit union depositors with insurance through FDIC and NCUSIF, other aspects of the financial world are less well regulated. Fraud is a risk that everyone needs to acknowledge and take steps to avoid. Common types of financial fraud include Ponzi schemes and pyramid schemes. With a Ponzi scheme, the criminal uses deposits from one set of investors to pay off previous investors. A pyramid scheme is based on recruiting new members to sell products and services. Pyramid schemes always fail because it is impossible to recruit enough new members over time. Telemarketing fraud is also a problem. Often, telemarketers attempt to sell products and services by misrepresenting outcomes. Today, identity theft is one of the fastest-growing types of financial fraud. It is therefore important to protect your personal information, including passwords, receipts, and credit card information.

Continuing Case: Tarek's Financial Journey

Tarek has been dating Samantha for the past 5 years, since their junior year in college. Just recently, they decided to get married. Samantha works for a regional tourism board where she makes $33,000 per year. In preparation for life after marriage, she and Tarek have developed the following budget and balance sheet.

Tarek and Samantha's Monthly Budget	
Sources of Income	
Income	$6,650
Interest	90
Total Income	$6,740
Expenses	
Taxes	$1,506
Rent	850
Vehicle insurance	420
Food and eating out	450
Car payments	790
Student loans	783
Sports and hobbies	300
Household	200
Retirement	266
Vacations	400
Credit cards	650
Total Expenses	$6,615
Surplus/Deficit	

Tarek and Samantha's Balance Sheet	
Assets	
Checking	$ 800
Savings	3,300
Automobile	29,000
Motorcycle	3,750
Furnishings	3,300
Clothes	5,600
Other household	3,200
Sports equipment	3,300
Collections	1,800
401(k)s	41,000
Total Assets	$95,050
Liabilities	
Credit cards	$13,000
Student loans	53,000
Car loans	21,500
Total Liabilities	$87,500

Instructions

a. Calculate their projected monthly income surplus or deficit.

b. Calculate their combined net worth.

c. Calculate the following financial ratios for Tarek and Samantha:

   1. Current ratio.

   2. Debt ratio.

   3. Savings ratio.

d. Calculate the emergency fund savings ratio for Tarek and Samantha, assuming that their monthly living expenses, in the case of an emergency, include all expenses less taxes, sports and entertainment, retirement savings, and vacations.

e. Describe their situation based on your emergency savings fund calculation from part d.

f. What investment assets would be most appropriate for their emergency savings fund?

Calculating the Cost of Life's Financial Journey

Neal recently graduated from college. He's employed by a space exploration company and makes approximately $65,000 per year. His primary goal is to begin saving for an emergency fund. After looking at his budget, Neal has determined that in the case of a severe emergency, he will need to replace 45% of his annual income. This is a conservative estimate, but Neal believes the amount should be sufficient to pay his rent, car payment, food, utility, and insurance expenses.

Instructions

a. How much income does Neal believe he needs in the case of a severe emergency?

b. After discussing his alternatives with you, assume Neal concludes that he can meet all his necessary expenses with as little as $29,000 per year. If his goal is to establish a 6-month emergency fund, how much should he have on hand today? What will he need if he has a 3-month emergency fund goal?

c. If Neal can save $300 per month toward his emergency fund goal, how long it will it take for him to obtain 3 and 6 months of needed expenses, assuming he can earn a 2% rate of return on his savings?

d. What type of assets would be appropriate for his emergency fund?

e. Today, Neal has few assets that he can use to pay emergency expenses. Until he saves enough for an emergency fund, what other options does he have for funding a potential emergency?

Planning for the Future

Traditionally, people have held their emergency fund and short-term assets in local financial institutions, such as banks and credit unions. This choice was tied to convenience factors. However, consumers have learned that convenience—being able to visit a bank or credit union branch personally—comes at a cost. The cost is most often represented with a lower rate of return on assets. The days of needing to hold emergency fund accounts locally has disappeared. Instead, it's possible to open federally insured accounts through online banks and financial institutions. Not only do these banking alternatives provide federal insurance, most offer rates of return on savings that exceed what a local institution can provide.

Instructions

Use the following format to compare online banking alternatives to one or more local banks or credit unions. After you have completed the comparison, summarize your findings in a brief report. Be sure to recommend the institution that would best match your needs for an emergency fund.

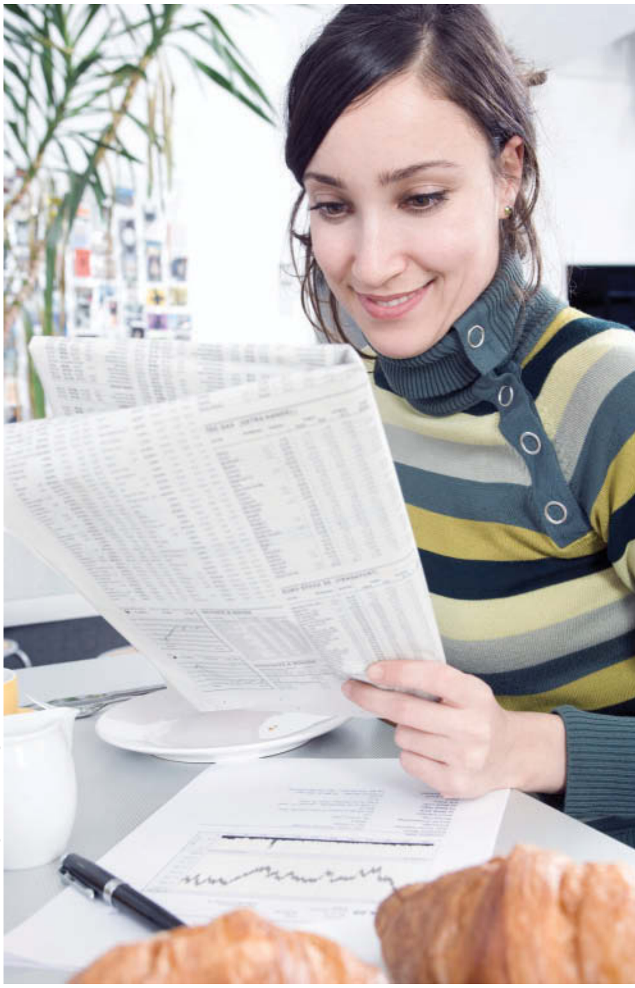
	Institution 1	Institution 2	Institution 3	Institution 4	Institution 5
Basic checking interest rate					
Minimum account balance					
Savings account interest rate					
Minimum account balance					
Money market interest rate					
Minimum account balance					
1-year CD interest rate					
Minimum account balance					
3-year CD interest rate					
Minimum account balance					
Days needed to access funds					
Nationwide ATM network (yes/no)					
Fee for ATM use					
FDIC- or NCUA-insured (yes/no)					
Access to “live” person for questions (yes/no)					

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER 8

Investments



Jin Lee/Bloomberg/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

8.1 Explain what a stock represents and how it can create wealth.

8.2 Discuss how stocks are traded and valued.

8.3 Describe a bond and how it differs from a stock.

8.4 Identify the benefits and options that mutual funds provide to investors.

8.5 Describe the advantages and use of exchange-traded funds compared with mutual funds.

8.6 Recognize the opportunities, benefits, and risks of investing internationally.

8.7 Discuss the expected relationships among risk, return, and marketability.

8.8 Describe brokerage accounts and the different types of brokerage firms.

8.9 Explain why some investors prefer to hold and invest their wealth in real estate.

8.10 Identify how supply and demand, spreads, and level of specialization affect the value of alternative investments.

8.11 List ways to protect your investments from losses and frauds.

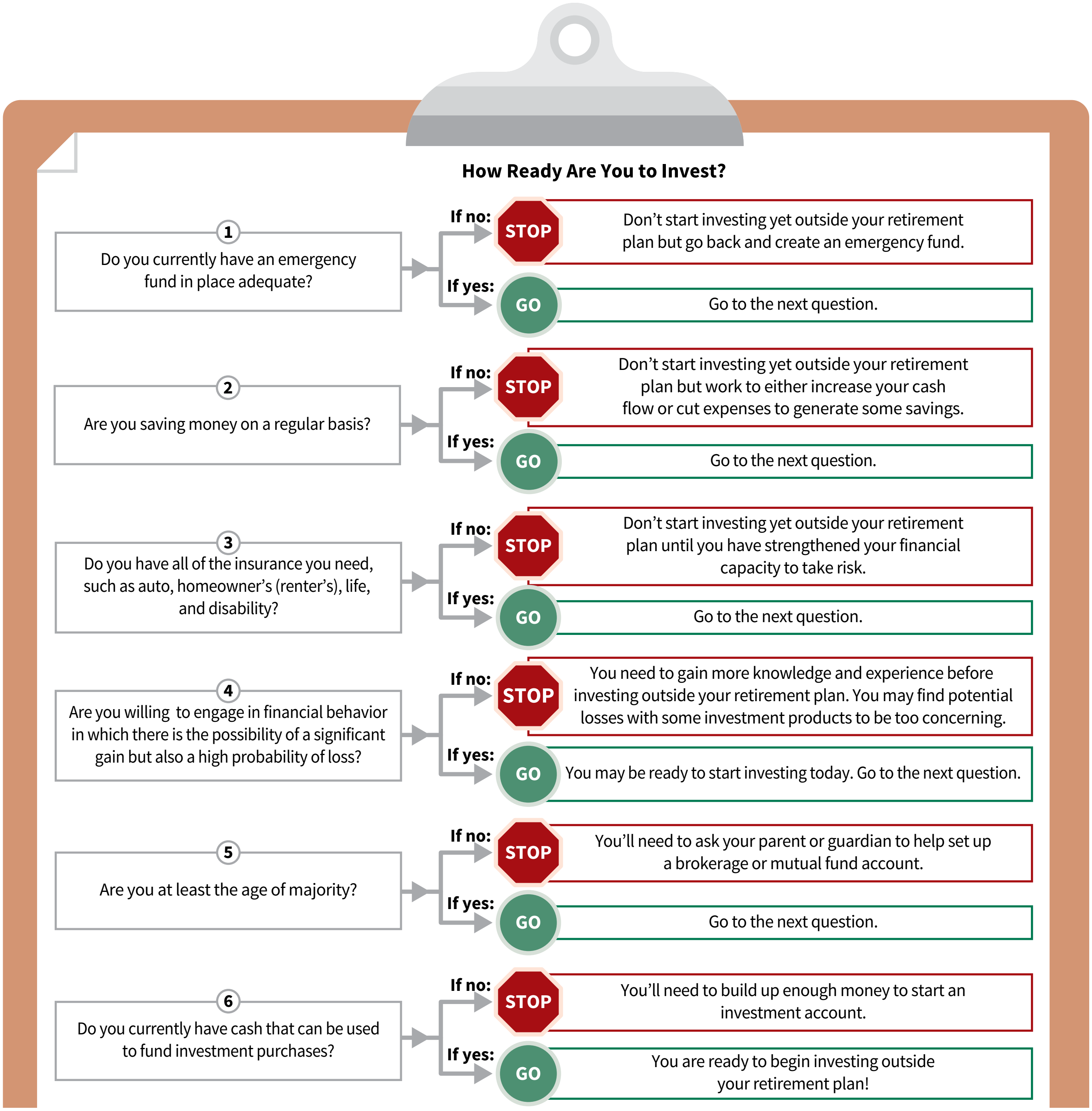
In this chapter, we discuss how to use investment products and services wisely to achieve your financial goals and objectives. The topics are designed to provide information to help you identify appropriate investments that match both your risk tolerance and investing time horizon. Over the course of this chapter, you will be learning about stocks, stock markets, bonds, mutual funds, exchange-traded funds, real estate, other investment assets, and brokerage accounts. You will also explore the advantages and disadvantages associated with investing internationally.

Investment Highs and Lows

After reading the chapter topics and applying the concepts, you will be in elite company. It turns out that only about 50% of Americans enjoy the benefits of investing outside safe and secure bank products. The percentage of investors was much higher before the global financial crisis that began in December 2007. At that time, nearly two out of three Americans owned stocks. In 2016, that number was down to about half, or one out of two. The problem is that, although Americans were heading back to the bank with their savings following the global financial crisis, the stock market was recovering and reaching all-time new highs. Interestingly, bank accounts and

certificates of deposit paid much less than 1% interest at that time. After inflation, the real return for those holding significant savings in banks, credit unions, and other "safe" accounts was less than zero!

The implication is clear: If you want to accumulate wealth over your lifetime, you must be willing to take calculated risks. Let's start by thinking about how prepared you are currently to be an investor. This is important because not everyone should be investing today. That may sound like a strange thing to say, considering this chapter is all about investing. But as you have been learning in this text, investing entails risk. Unless you are prepared and willing to take on risk, investing may not be the right thing to do at this time. The following questionnaire is designed to help you figure out if you are ready to jump into the investment world now or if you need a little more foundational work first.



No matter where you finished in the above questionnaire, by the time you reach the end of this chapter, you will see how practical investing can be!

Stocks: An Introduction

LO 8.1 Explain what a stock represents and how it can create wealth.

When you hear the word *stock*, what comes to mind? Do you envision the canyons of Wall Street or fast-paced traders yelling to buy and sell? In some ways, these images are related to stocks, but there is so much more to it. During your lifetime financial journey, you will likely be buying, holding, and selling stock as a way to increase your wealth—including holding sufficient assets to fund your retirement. In this topic, we discuss how stocks can be an invaluable asset for use in achieving your financial goals.

Overview of Stock

Defining Stocks

You hear about stocks almost daily. Listen to the news, or scan an online site, and you will likely see a reference to how the stock market is doing. People are interested in this information because stocks make up a large portion of nearly everyone's retirement savings. The broad stock market acts as a barometer of the health of the nation's economy. So, understanding a bit about stocks can help you make sense of the news and ultimately more about your own investments.

Basically, when you buy stock, you are buying an ownership share in a company. **Stock** (also referred to as **shares** or **equity**) represents your degree of ownership in a company. You can buy certain stocks (known as **publicly traded stocks**) in the **stock market** (see **Helpful Hint**). Others are **privately held stocks**, which means that a relatively small number of people or family members own all the stock available.

HELPFUL HINT

Think of the stock market as a type of giant supermarket where you can buy stocks available to the public.

The Creation of Stock

There are several steps that must occur before you have an opportunity to purchase an ownership position in a company.

1. The process begins when an entrepreneur has an idea for a new product or service and establishes a business.
2. If the new business grows, the business owner will most likely need to expand. This usually requires either taking out loans or finding outside investors to help fund expansion.
3. If a business owner wants to fund a large expansion, he or she will approach an underwriting firm to obtain greater sums of money. The **underwriter**—a firm such as an investment bank that helps other companies raise money—transforms the company from a private enterprise into a public firm.
4. If the business is not already organized as a corporation, the business owner will convert the business structure to a corporation, which creates shares of ownership in the company. The company will now be owned by shareholders, typically with the largest shareholder being the founder.
5. Most underwriters use a process called an **initial public offering (IPO)**—described in more detail later in this topic—to raise money from investors worldwide. At this point, anyone can now purchase shares in the public company, with those who own more shares having more control.

Keep in mind that thousands of companies are publicly traded. All publicly traded companies have, at one time or another, gone through this process. Some companies, however, have gone through similar steps to raise capital but are not publicly traded. These firms remain private, with shares owned by a select few investors. You generally cannot buy and sell shares of private companies.

A Business Example

Let's see how the process as shown in **Illustration 8.1.1**, from idea to stock creation, might work.

1. Bill makes delicious cupcakes and decides to open a store in town. He uses his savings and borrows money from his family and friends. Bill rents store space; buys mixers and ovens; and hauls in flour, sugar, and other ingredients. To his great surprise, a line forms around the block on opening day. Everyone in town wants a cupcake!
2. A few years go by, and Bill decides to expand operations by opening outlets all over the country. The money needed to pay for new stores, equipment, and managers ($10 million) is too much for a business loan. This is where the idea of issuing stock comes into play.
3. Bill reaches out to an investment banker (the **underwriter**). The investment banker will either put up the money Bill needs to expand or find other investment companies to fund the company's expansion. Investment bankers do *not* want to buy the cupcake business; they only want to help Bill obtain the money he needs and *make a profit* from the transaction.
4. The investment banker sells 1,000,000 shares of stock. For Bill to get money for expansion, plus profit for the investment banker, the stock will initially be valued and sold at $12 per share ($\$12 \times 1{,}000{,}000 = \$12{,}000{,}000$). Bill will receive the $10 million he needs, and the investment banker will get $2 million in profits (see **Helpful Hint**).
5. The investment banker arranges an IPO, which corresponds to the day the stock is sold to the public.

HELPFUL HINT

If not already set up as one, Bill's company is converted to a corporation and stock in the company is created. The investment banker can then sell this stock to investors to raise money for the company.

ILLUSTRATION 8.1.1

The Process of Stock Creation

Step 1:
Idea for a new product or service

Bill opens Bill's Cupcakes using his savings and obtaining loans.

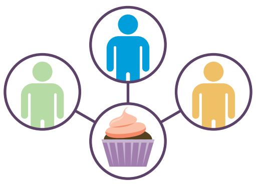
Step 2:
Business expansion planned and budgeted

Bill's expansion plans will cost $10 million, too much for a business loan.

Step 3:
Continued growth and fundraising with an underwriter

Bill finds an investment banker to fund his expansion plans.

Step 4:
Incorporation and stock valuation



Bill's Cupcakes is now a corporation with 1,000,000 shares for sale.

Step 5:
Shares sold in an initial public offering (IPO)

Bill raises $10 million for expansion, and the investment banker receives $2 million.

This example is overly simplified and does not present every way stock is created by companies, but it highlights the main reason companies issue stock: to raise money. It is important to remember, however, that the only time the company receives any money directly is when the initial stock is sold. After the stock is initially sold in the IPO market, investors, seeking to make a profit, can buy and sell the stock to other investors in the **secondary market** (sometimes called the *public market*) (see **Helpful Hint**). Most investors who own stocks acquire holdings from other investors in the secondary market.

HELPFUL HINT

The secondary market is primarily what people hear about or think of when the stock market is discussed.

Stocks and other investments are bought and sold using two prices.

- A **bid price** refers to the highest price a buyer will pay to purchase a specified number of shares of a stock at a specific time.
- An **ask price** refers to the lowest price at which a seller will sell a share of stock.

The bid price will almost always be lower than the ask or offer price. The difference between the bid price and the ask price is called the *spread*. In practice, the spread can be large, but it is usually very small. The spread is the profit earned by a securites (stock) dealer, who enables the buy and sell transaction.

With this information in hand, let's discuss next how being an investor can be advantageous to you.

Why Buy Stock?

Investors/Owners

Investors buy and sell stock through **stock exchanges**, which are organized markets where buyers and sellers conduct stock transactions—sometimes in person but mostly electronically. You might be asking yourself, why in the world would anyone want to buy stock? Based on Bill's example, he and the investment banker seem to be the only ones who benefit. Bill is able to raise money to build new stores, and the investment banker earns a profit for his or her work. What's in it for the investor?

Let's look at Bill's company more closely. Here's what happened after the IPO.

- Bill no longer owns 100% of his company! When he issues stock, he sells some or all of his ownership in the company. He is now an employee, an employer, and a business owner.
- Bill will have most likely negotiated with the investment banker to maintain ownership of some shares (see **Helpful Hint**).
- Regardless of how many shares Bill may have kept, from this point forward the investors "own" the company.
- **Owners** are entitled—by law—to share in the profits of the firm. However, they are not responsible to pay for any losses a firm may generate.
- The firm's investors also appoint, through open elections, the managers of the company.

HELPFUL HINT

Nearly all company founders maintain a significant ownership as a way to retain control of their company. That is, they can continue to make decisions regarding sales, dividends, and other issues.

As a result, if you buy one share of stock in Bill's Cupcakes for $12, you now own 1/1,000,000 of the business. Although you are not a significant owner, you are still entitled to your share of the profits. And this leads to one of the foundational truths of investing: Owners of profit-producing assets earn higher returns over time.

How Shareholders Make Money

Think of stocks as an asset that has the potential to produce income. Let's revisit Bill's Cupcakes. **Illustration 8.1.2** shows how the company's sales lead to earnings for shareholders.

1. If one cupcake sells for $2, this is the **gross sale**.
2. **Expenses** must then be subtracted from gross sales. Expenses ($1.90) such as ingredients, labor, rent, and taxes all reduce the initial sales value.
3. At the end of the day, that one cupcake may produce a **net profit** of 10 cents (Gross Sales − Expenses = Net Profit).
4. If the company sells 10,000,000 cupcakes and earns $0.10 on each one sold, the firm will generate a $1,000,000 profit.

ILLUSTRATION 8.1.2

From Company Sales to Shareholder Earnings

Gross sales (sales price)	$2.00
− **Expenses**	− 1.90
= **Net profit or loss per cupcake**	= $0.10
× **Total units sold**	× 10,000,000
= **Net profit**	= $1,000,000
÷ **Total shares in the market**	÷ 1,000,000
= **Earnings per share**	= $1.00

Let's say that Bill's Cupcakes has net profits of $1,000,000. Because 1,000,000 shares were sold in the IPO, the firm's **earnings per share (EPS)** is $1 for each share owned. Because you own one share, your share of earnings is $1. It is this share of the profits that entices investors to own stock.

- Investors, in general, will be drawn to companies that produce high, growing, and consistent profits.
- The faster a company can grow profits, the more valuable the stock will be in the future.

Does this mean you will receive that $1 for the one share you own in Bill's Cupcakes? Not immediately, and it is not guaranteed. Over time, successful corporations transfer a portion of their earnings to shareholders through dividends and share price appreciation. This is how your investment in stock can actually increase your wealth.

Using Stocks to Create Wealth

There are two ways to make money owning stock.

HELPFUL HINT

Stock prices are also affected by changing regulations and laws, the national and world economy, and major events throughout the world.

1. **Buying shares of stock in a profitable firm, holding the stock for a period of months or years, and then reselling the shares at a higher price**. **Stock prices**, over time, move up or down as the anticipated profits of a company rise and fall (see **Helpful Hint**). The difference between the sale and purchase price of a stock is known as a **capital gain**. (However, if the stock price falls over time, selling it will produce a **capital loss**.) One purpose of stock markets is to provide an honest and open place where investors can buy and sell shares of stock, which provides liquidity for buyers and sellers.
2. **Receiving earnings in the form of dividends**. Some, but certainly not all, companies distribute a portion of earnings (current or retained earnings from prior years) to shareholders. Dividends can be in the form of cash, additional stock, or other property. Dividends are typically paid every 3 months.
   - Let's say the cupcake stock is now selling for $13 per share.
   - If the company pays out 50% of the EPS—$0.50—you will earn a 3.8% return on your investment ($0.50 ÷ $13). This is called the **dividend yield**.

As shown in **Illustration 8.1.3**, you have three options when it comes to increasing your wealth through stock ownership.

1. You can buy stocks that focus on stock price appreciation. These are called **growth stocks**.
2. Some stocks appeal to investors needing income by paying out a large portion of earnings in dividends. These are called **income stocks**.
3. Other stocks focus on providing shareholders a combination of stock price appreciation and dividends. These stocks are sometimes referred to as **growth and income stocks**.

Whatever option you choose, the fundamental truth of investing applies: If you invest in a company that is profitable, your wealth will increase.

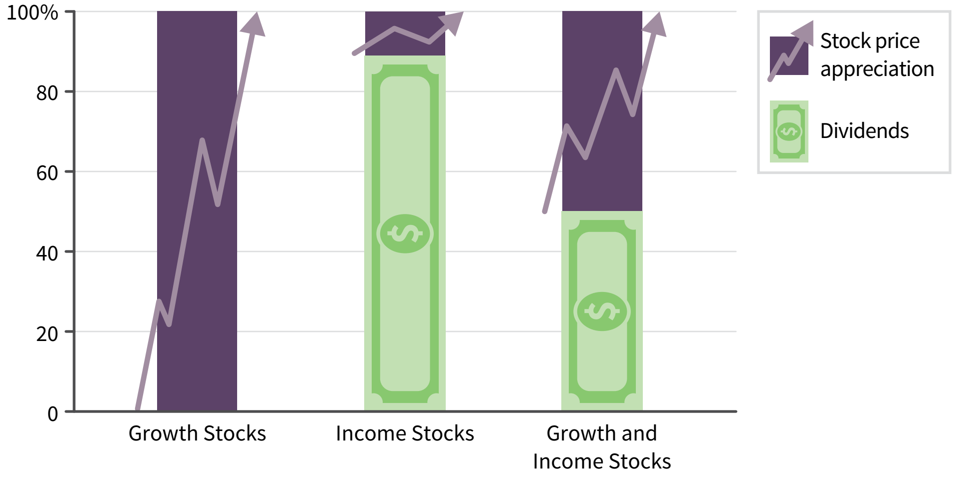


ILLUSTRATION 8.1.3

Wealth Creation from Stock Ownership

Building Wealth with Stocks

Who are the richest people in the United States? If you put a list together, would it include primarily entertainers, athletes, politicians, bankers, or stockholders? If you are not sure, search for a recent *Forbes* or similar article listing this year's wealthiest people living in the United States. Although the names on the list will change year to year, one thing stays constant. Many people on the list own shares in profitable companies that are publicly traded, often firms they helped create.

Nearly all of those on a "wealthiest people list" followed the same plan that Bill used to build his cupcake empire. You may not want to start your own company, but by now you should realize that a clear path to achieving your financial dreams and goals consists of owning stock of profitable companies.

- One way to get started is to purchase shares in companies using a **direct stock plan**. These plans, offered by thousands of companies, allow you to purchase shares in firms with little or no transaction costs. With a direct stock plan, the company will purchase or sell shares to you at specific times, sometimes daily, weekly, or monthly, at an average market price.
- Additionally, almost every company that pays dividends allows shareholders to reinvest dividends in more shares through the company's **dividend reinvestment plan (DRIP)**. A DRIP allows you to put the power of compound interest to work by purchasing more shares of stock every time a dividend is paid.

Keep in mind that for every name on a wealthiest-people list, there are many more examples of people whose stock investments have led them to financial ruin. Investing in individual stocks is time consuming and hard work. You need to learn about ways to classify stocks, price stocks, and decide whether you should buy or sell shares in a company. This is one reason many financial experts suggest that the average person should invest in mutual funds or ETFs (exchange-traded funds), which provide a way to own groups of stocks with the help of a professional money manager while also reducing your risk. We will discuss these investments later in the chapter.

Concepts in Action

Jorge currently owns 10 shares of stock in Walco Corporation, a membership warehouse retailer. During a recent year, Walco had EPS of $5.33. At the time, each share of Walco stock cost $164.73. Walco's annual dividend was $1.80. What was Walco's dividend yield?

Solution

Because the stock was priced at $164.73 per share, the dividend yield was 1.09% ($1.80 ÷ $164.73). Jorge can expect to receive $18.00 ($1.80 × 10 shares) over the next year in dividends.

End-of-Topic Assessment

Multiple-Choice Questions

1. Why might a business owner sell stock to outside investors?
   - **a.** To raise money for expansion.
   - **b.** To maximize control over the firm's operations.
   - **c.** To minimize the need to generate a profit consistently.
   - **d.** Both to raise money for expansion and to maximize control over the firm's operations.

2. **Calculate** A midsized firm plans to issue 10 million shares during an IPO. The investment banker (underwriter) plans to sell shares at $22.50; however, many investors believe the company should be valued at $32.00 per share. If the underwriter charges a $3 million fee to undertake the IPO, how much will the firm raise in the IPO?
   - **a.** $320,000,000.
   - **b.** $317,000,000.
   - **c.** $225,000,000.
   - **d.** $222,000,000.

3. **Calculate** Stock of Terry Motors, Inc. was recently traded on a stock exchange as $108 bid. The spread price was $2. What was the ask price?
   - **a.** $106.
   - **b.** $108.
   - **c.** $110.
   - **d.** $112.

4. **Calculate** Your next-door neighbor owns a local restaurant. She currently has gross sales of $13 million. Her expenses, which include ingredients, rent, and personnel, run $11.5 million. What is her net profit or loss?
   - **a.** $1.5 million loss.
   - **b.** $1.5 million profit.
   - **c.** $11 million profit.
   - **d.** $13 million loss.

5. **Calculate** Your next-door neighbor's local restaurant is busy all day. She currently has gross sales of $13 million. Her expenses, which include ingredients, rent, and personnel, run $11.5 million. Your neighbor is considering bringing in outside investors. She would like to issue 2 million shares of stock and sell the stock for $25 each in an IPO. If she does this, how much would someone who purchases one share earn? In other words, what is the earnings per share for the company?
   - **a.** $0.03.
   - **b.** $0.06.
   - **c.** $0.25.
   - **d.** $0.75.

6. The primary way stock investors make money is through:

   I. capital gains.
   II. dividends.
   III. interest.
   - **a.** I only.
   - **b.** III only.
   - **c.** I and II only.
   - **d.** I and III only.

7. **Calculate** Which of the following is *true* if Nicki purchases 100 shares of an IPO for $35 per share and sells the shares for $40 each? (Refer to the capital gain discussion from a previous chapter if needed.)
   - **a.** She will have a 5% capital gain.
   - **b.** She will have a 14% dividend.
   - **c.** She will have a $500 capital gain.
   - **d.** She will have a $5 dividend per share.

8. **Calculate** Nevada Copper Company, Inc. reported a net profit of $8.00 per share and a dividend of $3.50 per share. If you buy shares of the stock at $93.25 per share, what is your dividend yield?
   - **a.** 43.75%.
   - **b.** 12.33%.
   - **c.** 8.58%.
   - **d.** 3.75%.

9. **Calculate** Your next-door neighbor's local restaurant currently has gross sales of $13 million. Her expenses, which include ingredients, rent, and personnel, run $11.5 million. If you purchased 100 shares of your neighbor's company stock at the IPO price of $25 per share and the company distributed a $1 dividend per share, what would be your dividend yield?
   - **a.** 1%.
   - **b.** 4%.
   - **c.** 8%.
   - **d.** 14%.

10. To have equity in a company means that:

    I. you have lent money to the firm.
    II. you receive dividends when distributed by the firm to all shareholders.
    III. you have an ownership interest in the firm.
    - **a.** I only.
    - **b.** III only.
    - **c.** I and II only.
    - **d.** II and III only.

Adventures in Personal Finance

Short Answer

1. Describe the difference between an investor and a saver.

2. Explain why some business owners might decline to issue stock that can be traded on a stock exchange.

3. Although most investors believe that the value of a stock on its first day of trading (the IPO day) is a bargain, what can happen to drive the price of a new stock lower?

4. **Calculate** The stock of **Apple** is traded on the NASDAQ stock market under the symbol AAPL. Here are some trading figures for APPL:

Bid: $532.20 Ask: $532.50 EPS: $44.15 Dividend: $10.60

a. How much will you pay to purchase one share of APPL?

b. How much did APPL earn per share last year?

c. How much does APPL pay in a dividend per year?

d. What is the dividend yield?

Explore

1. **Writing** Visit the website for *Forbes* and search for its list of richest people. Write a brief summary of the characteristics of the richest of the rich. In your report, be sure to highlight how many started their own firms and how many own stock. Based on your research results, summarize what it means to be an investor and how investing relates to wealth accumulation.

2. **Writing** Conduct a study to identify the five most profitable companies operating in the world. Rank the companies from most to least profitable. Also, list the home country of each firm. Describe any similarities and differences between and among the firms. Write the results of your research in a short paper.

3. Identify five to 10 companies that you think have a strong market position and a positive future. Visit each firm's website to determine which of the companies has a direct stock purchase plan. Summarize the rules regarding each firm's plan, paying particular attention to the minimum investment requirements, transaction fees, and other expenses. Given your research, would you consider purchasing shares using a purchase plan? Why or why not?

Expanded Learning Activity

Calculate Think of products or services you use on a daily basis, such as the TV you watch, the food you eat, and the clothes you wear. Each of these items is produced by a publicly traded company. Visit a finance website (e.g., **Yahoo! Finance** or **Google Finance**) and choose five of your favorite companies that are publicly traded. Write down the ask price, the earnings per share, and the dividend for each stock. Track the price of each stock over a 30-day period. Plot out the price movement, and then find or calculate the dividend yield for each stock. How many stocks went up, down, or stayed the same? What might explain the changes in price?

Stocks: Valuation and Ownership

LO 8.2 Discuss how stocks are traded and valued.

Websites and other online material often sensationalize get-rich-quick stories to the point that some people might mistakenly feel as though they simply need to follow a few "secret" steps—given or sold to them by family, friends, or online newsletters—at which time money will no longer be a concern. Similarly, although buying stocks may seem an easy way to make money, if you don't understand how stocks are traded and valued, you may find yourself on the losing end of trades. In this topic, we discuss the specifics of stock ownership that will help you accumulate wealth with greater confidence.

Stock Ownership

Brokerage Accounts

HELPFUL HINT

Cash within brokerage accounts is insured by the federal government (similar to bank accounts). However, investments, such as stocks, are not insured.

Where do you go to buy shares of stock? First, you must generally have a brokerage account. A **brokerage account** is an account with an investment company into which you deposit money and then use that money to buy stock (see **Helpful Hint**). You have two primary choices when it comes to opening a brokerage account:

1. **Full-service brokers**, like **Merrill Lynch**, **Edward Jones**, and **UBS**, provide advice before you buy and sell stocks.
2. Online brokerage firms, or **discount brokers** such as **Scottrade**, **TD Ameritrade**, **Fidelity**, and **E*Trade**, are used by investors who do not need or want advice.

Both types of brokers charge a commission every time you buy or sell shares of stock. However, the commission is lower for online brokerage firms—ranging from $1 to $15 per trade. Both types of brokerage firms also provide investors with recordkeeping services so that you will know how much you paid for a stock, when you purchased it, and any gains or losses that have been received.

A new type of firm has entered the brokerage business. These firms allow investors to buy and sell stock without paying a commission. One firm, for example, offers $0 trades as long as an investor keeps extra money on deposit (which the firm then uses to earn interest through its own investments and loans). Some of these firms charge a set yearly account fee, while other firms make money by buying and selling stock to investors at significantly different bid and ask prices.

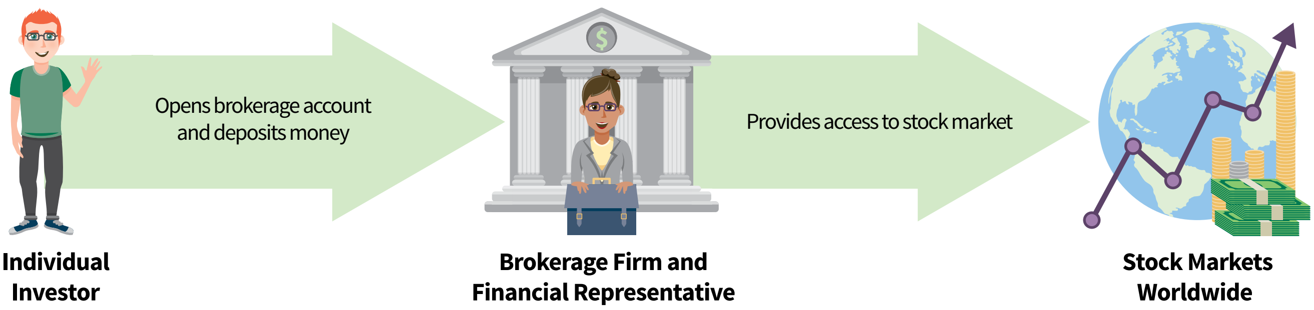
Stock Exchanges

Once you have opened a brokerage account, it is time to find stocks to purchase. Remember, all publicly traded stocks are bought and sold on a **stock exchange**, which is simply a place where buyers and sellers meet to trade stocks. By opening a brokerage account, you gain access to these markets. There are three major stock exchanges in the United States:

1. **New York Stock Exchange (NYSE).**
2. **American Stock Exchange (AMEX).**
3. **NASDAQ.**

Together, these exchanges give you access to thousands of companies. If you add in stocks traded in international markets, you have more than 10,000 stocks to choose from. The process of establishing a brokerage account and purchasing shares on an exchange is shown in **Illustration 8.2.1**.

ILLUSTRATION 8.2.1 **The Process of Purchasing Shares Through Stock Exchanges**



Okay, we know that choice is a good thing. But sometimes too many choices can lead to mental overload. For example, how is someone supposed to pick a few good investments from thousands of choices? You can hire a financial advisor to help you make buying and selling decisions. An effective alternative is to become better informed yourself. That is, you should consider the following procedure:

- Open an online brokerage account.
- Conduct your own research (see **Helpful Hint**).
- Buy and sell stocks and other investments online to create your own portfolio of investments.

Let's turn now to some valuation methods you can use to help make the research process easier.

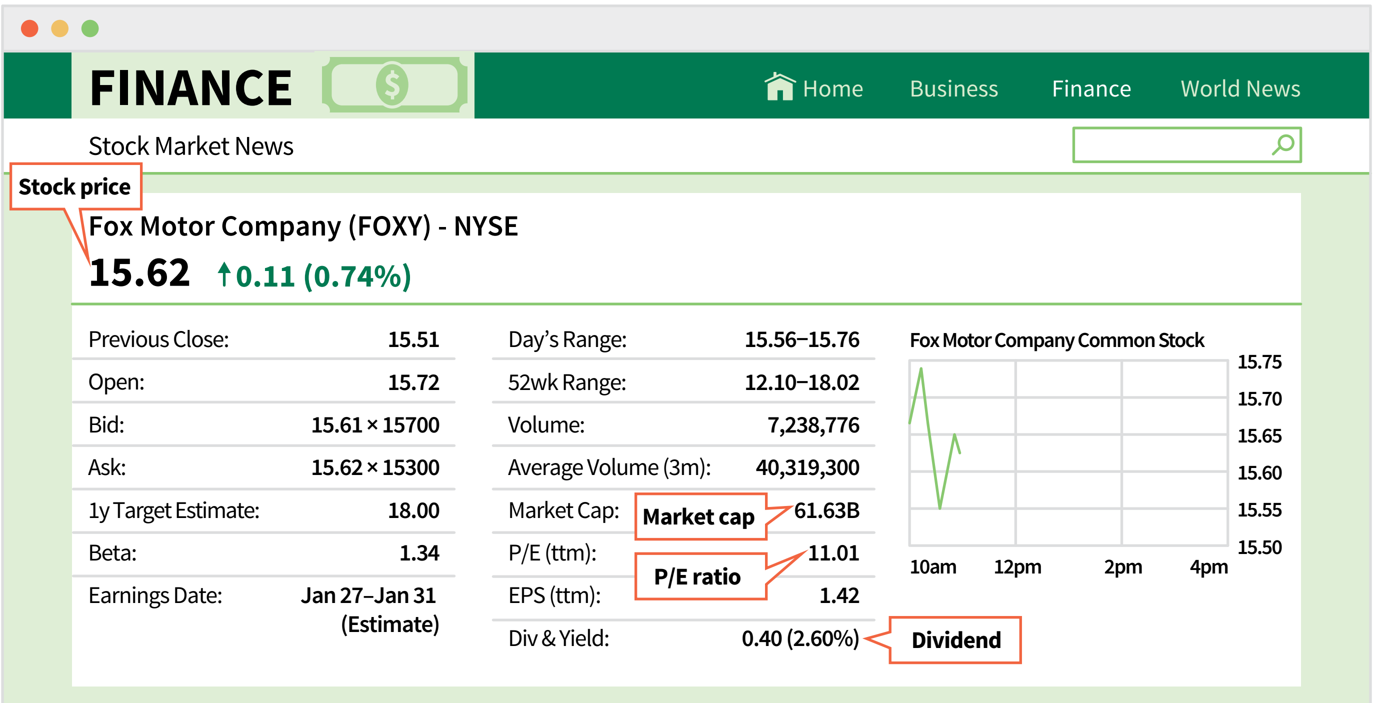
HELPFUL HINT

Pay attention to news and current events that relate to your investments.

Valuing Stocks

The Internet provides a tremendous amount of information about stocks. For example, **Illustration 8.2.2** presents information you might see on an online site that offers financial information about Fox Motor Company shares.

ILLUSTRATION 8.2.2 **Online Stock Information**



In illustration 8.2.2, note the four highlighted figures:

1. The stock's price (on this day and time, Fox stock could be purchased for $15.62 per share).
2. The stock's dividend ($0.40).
3. The stock's price to earnings (P/E) ratio (11.01).
4. The stock's market capitalization (market cap) ($61.63 billion).

You can use these four data points to value a stock (you will learn how to use these data in the following pages). Keep this in mind before moving forward: the process of stock valuation can get quite complex. What we present here is a basic method that some investors use to get a feel for the value of a given stock. If you are a novice investor, you may want to take note of this valuation method but ultimately invest in mutual funds (which we will describe in another topic).

Discounted Dividend Valuation Model

As an investor, here is an important question that you need to ask: is the price of Fox stock a bargain, overpriced, or priced fairly? One way to answer this question, for companies that pay dividends regularly, is to use the **discounted dividend valuation model**:

$$\textbf{Stock Value} = \frac{\textbf{Dividend} \times (\textbf{1} + \textbf{Dividend Growth Rate})}{(\textbf{Your Required Rate of Return} - \textbf{Dividend Growth Rate})}$$

In the formula:

- The dividend is the dollar amount you will receive for every share owned.
- The dividend growth rate is how quickly the dividend has grown and will hopefully grow in the future.
- Your required rate of return is what you need to earn in order to make an investment.

Let's now value the Fox stock. To do this:

1. Check Illustration 8.2.2 and find the stock's current dividend: $0.40 per share.
2. Determine your required rate of return. This input is unique to you (see **Helpful Hint**).
3. Calculate how quickly you think the dividend will grow in the future. Most companies that do pay dividends increase them over time. To estimate a company's growth rate, you can review its history of dividend payments, which is usually 2% or 3% per year.

HELPFUL HINT

If you have a high risk tolerance, your required return will be *lower* (such as 5%) compared to someone who has a low tolerance for risk (such as 9%).

HELPFUL HINT

Investors with a higher risk tolerance (lower required rate of return) are usually willing to pay a higher price for a stock than those with a lower risk tolerance (higher required rate of return).

Illustration 8.2.3 shows the value of Fox stock with different inputs. As the required rate of return increases, the estimated value decreases. As a result, what is a bargain (when the estimated price is more than the current price) to one investor may be overvalued to another investor (see **Helpful Hint**). For example, the estimated value of Fox stock, given a required rate of return of 10%, is [($0.40) × (1 + 0.03)] ÷ (0.10 − 0.03) = $5.89.

ILLUSTRATION 8.2.3 **Fox Motor Values Based on Discounted Dividend Valuation Model**

Dividend	$0.40	$0.40	$0.40	$0.40	$0.40	$0.40	$0.40
Your required rate of return	10%	9%	8%	7%	6%	5%	4%
Dividend growth rate	3%	3%	3%	3%	3%	3%	3%
Calculated value	$5.89	$6.87	$8.24	$10.30	$13.73	$20.60	$41.20
Current price	$15.62	$15.62	$15.62	$15.62	$15.62	$15.62	$15.62
Result	Overpriced[a]	Overpriced	Overpriced	Overpriced	Overpriced	Bargain[b]	Bargain

[a] When estimated value is less than current market price.
[b] When estimated value is greater than current market price.

There are a few challenges associated with using the discounted dividend valuation model (see **Helpful Hint**).

- Many companies do not pay dividends on their stock, making this valuation method difficult to use.
- Valuation fails to consider other factors that can influence the price of a stock.

So why even consider this valuation technique? This approach helps illustrate how mutual funds and other investments that purchase stocks for you operate. Additionally, if you ever do decide to buy stocks directly, you will have at least one tool to help you estimate value, even if the tool is somewhat basic.

HELPFUL HINT

You should only compare companies in the same or similar industry.

P/E Ratio

Investors also use a stock's **P/E ratio** to estimate the relative value of a stock; that is, they divide the stock price per share (P) by the earnings per share (E).

- The P/E ratio tells you how much you are paying for one dollar of current earnings.
- Stocks typically trade in a P/E range between 10 and 30.
- Value-oriented investors (those who tend to be risk-averse) prefer to purchase stocks with lower P/E ratios because they are able buy shares at a lower price (see **Helpful Hint**).

HELPFUL HINT

Companies in different types of industries will have different average P/E ratios, so it is best to avoid comparing companies across industries.

The reason for different P/E ratios from one stock to another has to do with how quickly earnings are *expected* to grow. Generally, investors are willing to pay a premium (high P/E ratio) for shares of companies whose earnings are growing rapidly. Growth-oriented investors (those who are risk-seekers who believe the future of a company is promising) often purchase companies with relatively high P/E ratios because growth investors are more interested in the large future earnings of a company, not necessarily the present earnings or current dividends.

If earnings growth is *expected* to be average or below average, then a stock will generally have a lower P/E ratio. Fox, which has a P/E ratio of 11.01 ($15.62 ÷ $1.42), would be considered a value-oriented investment in the market because the P/E is on the low side of the historical P/E range.

One challenge when evaluating companies is that some startup companies do not have any current earnings. These companies typically lose money as they build up their brand and business, so a P/E ratio cannot be calculated. In these cases, P/E ratios should not be used to evaluate a company. Metrics like a P/E must be used in the appropriate context, meaning when a company generates a profit.

Market Capitalization

Investors often classify companies into one of nine broad categories as shown in **Illustration 8.2.4** (see **Helpful Hint**). To see how this works, find Fox's **market capitalization (market cap)** in Illustration 8.2.2, which is just the price of a stock multiplied by the total number of shares in the marketplace. As you can see, the market cap for Fox is $61.63B (billion). Market capitalization allows investors to compare large companies to other large companies, and small companies to small companies.

ILLUSTRATION 8.2.4

Stock Classification Table

Value	Size		
	Market Capitalization		
	Large (more than $10 billion)	Medium ($2–$10 billion)	Small (less than $2 billion)
Bargain (value)			
Fairly priced (average)	**Fox**		
Expensive (growth)			

HELPFUL HINT

The stock classification table can only be completed after applying a stock valuation model and determining a stock's market capitalization.

Investors can classify any stock with a market cap as follows.

- More than $10 billion is a large company stock.
- Any stock between $2 and $10 billion is a medium company stock.
- Anything less than $2 billion is a small company stock.

HELPFUL HINT

Always remember that financial experts recommend that the most people are best served by purchasing mutual funds or ETFs (exchange-traded funds) rather than individual stocks.

As you can see from Illustration 8.2.4, Fox is a large company and fairly priced (at least for a risk-averse investor)!

- The larger the company, the "safer" the stock.
- But remember that safety is relative. Unlike a bank account, stocks can go down in value (see **Helpful Hint**).
- Large-company stocks just tend to go down less than small-company stocks and, conversely, small-company stocks tend to increase more than large-company stocks.

Applying Knowledge and Intuition

The discounted dividend valuation model and the P/E ratio provide a basic guide to stock valuation. However, as you might imagine, there are literally hundreds of tools, techniques, models, and formulas that are used by investors to value stocks and predict future stock prices. In fact, sometimes the best investment strategies and the best investments are made by combining basic analysis with intuition.

For example, consider Afrah. She is a novice investor and has a moderate level of risk tolerance. But she sees the value of opening a brokerage account and starting to invest. She would like to start her journey in the stock market with a few reasonably priced companies that are more safe than thrilling.

Combining Analysis with Knowledge

In addition to the valuation and classification methods just described, Afrah can also use other data points, as well as other more subjective sources, to evaluate a company's stock like Fox.

- Afrah can evaluate Fox's P/E ratio, which is close to 11. This is on the low side of the price range (10–30, as discussed previously).
- Afrah's risk tolerance is moderate. This means her required rate of return is likely between 6% and 7%. Data from Illustration 8.2.3 indicate that she should therefore value Fox stock between $10 and $14 per share. If the price of Fox stock is within this range, then the stock is fairly priced for Afrah. If the current price of Fox stock falls below this range, it is a good value for Afrah. If it is over this price range, then the stock is likely not a good choice for Afrah.
- After Afrah's analysis is complete, she should consider verifying her work by looking to see which cars people are actually purchasing and driving. A good sign would be if people are excited about buying Fox cars. This would indicate that the company is producing something popular. She may also consider that Fox's auto quality rankings have been improving and surpassing some other auto manufacturers.
- Finally, Afrah may want to consider Fox's future plans and directions with regard to all electric vehicles, autonomous driving vehicles, and other transportation industry developments. This analysis will be influenced by Afrah's intuition.

HELPFUL HINT

Yahoo! Finance, Google Finance, and Morningstar are free Internet sources and provide everything you need to start analyzing and classifying stocks today.

Finding stocks to analyze and classify can be quite fun—really! A great way to find stocks involves looking at what you own and love already. For example, what do you and your friends wear to school? What electronic gadgets are you buying or hope to buy? What stores are popular? Once you have identified some stocks that might be of interest, do some research. If you can, through careful research and applied knowledge and intuition, spot the "next big thing" and buy shares in that company, then you will be even closer to reaching your financial goals!

Concepts in Action

Lisa is thinking about purchasing shares of Agra Finance Company. Lisa has a low risk tolerance, so her required rate of return for Agra stock is 11%. Assume Agra stock currently has the following characteristics:

Stock price: $153.61

Dividend: $2.52

P/E ratio: 18.02

Market capitalization: $800,898,000,000

Assume Agra's dividend has increased an average of 10.26% annually over the past 3 years. However, Lisa estimates that the dividend growth will slow to a rate of 8% annually going forward because Agra's P/E ratio is relatively low, suggesting the earnings are not expected to grow very fast. Based on this information, do you think Agra stock is a good investment for Lisa?

Solution

Using the discounted dividend valuation model, the calculated value for Agra stock is:

$$\frac{\$2.52\ (1+0.08)}{(0.11-0.08)} = \$90.72$$

This valuation suggests that Lisa should be willing to pay up to $90.72 for a share of Agra stock; the price is currently $153.61. Based on this valuation model, Lisa should not purchase Agra stock at the current price. However, if Lisa uses the actual dividend growth rate of 10.26% in her calculations, rather than her estimated 8% growth rate going forward, the projected price of the stock is:

$$\frac{\$2.52\ (1+0.1026)}{(0.11-0.1026)} = \$375.48$$

If the dividends were to continue to grow at 10.26% and Lisa was only looking for an 11% return, then she would be willing to pay $375.48 per share. The current price of $153.61 would then be a bargain. No one can predict the future, so Lisa will need to make as many calculations as possible and then use her intuition to make the final decision. Lisa may reason that it is unlikely that this company, based on market capitalization, will continue to grow its dividends at 10.26% annually. Based on this information and Lisa's own knowledge and intuition, Agra may not look like an investment that Lisa wants to pursue. Instead, Lisa might want to look for investments that are more consistent with her risk tolerance and expectations.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which firms would be considered full-service brokers?
   - **a.** Merrill Lynch.
   - **b.** Morgan Stanley.
   - **c.** UBS.
   - **d.** All of the answer choices or correct.

2. All of the following firms are "do-it-yourself" online brokerage firms, *except*:
   - **a.** Fidelity.
   - **b.** TD Ameritrade.
   - **c.** E*Trade.
   - **d.** Edward Jones.

3. If you open a brokerage account at a "do-it-yourself" online discount brokerage firm, you can expect to ___________ than you would at a full-service broker.

a. pay lower commissions

b. have limited access to buying and selling stocks

c. be paired up with a stockbroker to help you make decisions

d. receive less information about potential investments

4. Three major stock exchanges in the United States are:

I. AMEX.

II. NASDAQ.

III. NYSE.

IV. OTC.

a. II, III, and IV.

b. I, III, and IV.

c. I, II, and IV.

d. I, II, and III.

5. If earnings growth is expected to be average or below average, then the stock will generally:

a. have a high P/E ratio.

b. have a lower P/E ratio.

c. be considered a relative value in the market.

d. be expected to grow earnings at higher rates in the future.

6. All of the following are true of market capitalization classifications, *except*:

I. Anything less than $2 billion is a small cap company.

II. Any stock with a market cap of $8 billion and higher is a large cap company.

III. Medium cap companies have market capitalizations of between $4 and $8 billion.

a. I only.

b. I and III only.

c. II and III only.

d. I, II, and III.

7. **Calculate** Akron, Inc. is expected to pay a dividend of $4.25 this year. If its dividend growth rate is 6%, how much will the dividend be in 2 years? (Refer to time value of money calculations in a previous chapter if needed.)

a. $4.51.

b. $4.25.

c. $4.78.

d. $4.00.

8. **Calculate** XYZ Sports Apparel has a current stock price of $32.50. The company paid $1.06 in dividends this year, and dividends are expected to grow at 5% per year. If you have a required return of 9%, what is XYZ worth to you?

a. $27.83.

b. $36.00.

c. $25.34.

d. $32.50.

9. **Calculate** A company you are considering investing in has a dividend of $0.40 per share. If you have a required return of 12% and the dividend is expected to grow at 3% per year, the discounted dividend valuation model would value the stock at:

a. $5.50.

b. $4.58.

c. $5.89.

d. $4.98.

10. Which of the following statements is *true*?

a. The best investment strategies and the best investments are made based on luck.

b. The best investment strategies and the best investments are made with intuition.

c. The only way to identify a potentially profitable stock is through basic stock analysis.

d. Sometimes the best investment strategies and the best investments are made by combining basic analysis with intuition.

Adventures in Personal Finance

Short Answer

1. Using **Google Finance** or **Yahoo! Finance**, compare **Ford Motor Company** (F) and **General Motors** (GM). Which of these two companies has a higher P/E ratio? Which has a higher dividend yield? What is their market capitalization? If you had to invest in one of these two companies, which one would you choose to invest in? What other information would you use to make your decision?

2. For many companies, it is difficult to evaluate the value of the stock. One example is **Tesla Motors Inc**. Tesla's ticker symbol is TSLA. What is Tesla's P/E ratio? What is its market capitalization and stock price? Does this make sense? Why might investors be willing to invest in a company with a negative P/E ratio (meaning it is not earning any money)? Are there other companies that do not have earnings but are highly valued in the market?

3. The discounted dividend growth model is useful if a company is paying a dividend; however, some companies do not pay dividends. Look up **Alphabet Inc**. (GOOG), the parent company of **Google**, or another company that does not pay a dividend. What are its current market capitalization and P/E ratio? What is its current dividend? Why might investors be willing to buy this stock if they are not currently receiving any dividends?

Explore

1. Using **Google Finance** or **Yahoo! Finance**, compare and classify the following six companies based on their P/E ratios and market cap numbers (stock ticker symbol is in parentheses): **Amazon.com** (AMZN), **General Electric** (GE), **GNC** (GNC), **Skullcandy** (SKUL), **Harley-Davidson** (HOG), and **Rite Aid Corporation** (RAD). Use Illustration 8.2.4 to help you classify these stocks.
2. **Calculate** Carroll has diligently invested in Giant Oil Corporation for 20 years. Over that time, the stock has gone up and down in price, but Carroll has continued to invest in it. Her average purchase price for each share of stock is $35. The stock is currently trading for $83 per share. What will be Carroll's long-term capital gains tax on her $48 ($83 – $35) per share gain? If Carroll owns 500 shares, what will be her after-tax gain? Assume Carroll has a 15% long-term capital gain tax rate.

Expanded Learning Activity

Calculate **Writing** **Presentation** If you were going to invest some money in stocks, what would you look for? Think of two publicly traded corporations in the same industry (it may be easier to think of one publicly traded corporation and then think about its competitor). Gather information about the stock price of both companies. Use the principles that you have learned so far to determine which company's stock is a better investment for you. Is the stock of either company a "good" investment based on your analysis? Write a summary of your analysis and conclusion in a 1-page paper that may be shared with your classmates.

Bonds: An Introduction

LO 8.3 Describe a bond and how it differs from a stock.

On some roads in the world, you are able to drive as fast as you would like. Clearly, if you are in a sports car traveling 120 miles per hour, you will get to your destination faster than someone traveling in a van going 55 miles per hour. However, traveling at higher speeds increases the risk and severity of accidents. Eventually, both the sports car and the van will reach their destination, but all other things being equal, the sports car driver who pushes his or her car to the maximum will take substantially more risk getting to where he or she wants to be.

Similarly, assets that generate higher returns, such as stocks, can sometimes be unpredictable, dramatically fluctuating in value over short periods of time. This uncertainty or volatility is what investors refer to as *risk*. Other investments, like bonds—in this case, a van—tend to move up and down in value with less variability.

The volatility associated with stocks sometimes concerns investors. As a result, most people prefer to diversify their assets—spreading investments across different investment assets—to reduce the effects of short-term stock price changes. Other investors may be looking for more income from their investments or have shorter time horizons. This is where bonds come into play. In this topic, we discuss how bonds can help you reach your financial goals.

Overview of Bonds

Advantages of Bonds

Rather than buying ownership in a company by purchasing stock, some investors choose to lend money to firms and governments by purchasing bonds.

Bonds represent contractual loans to corporations and governments. Bonds appeal to investors (and companies) for three main reasons:

1. Bonds provide investors with a low-risk fixed income in the form of interest payments.
2. Bonds include a tax incentive for the companies that issue bonds; as a result, the interest a company pays to bondholders (which is how investors make money) is tax-deductible for the company, whereas dividends paid to shareholders are not.
3. Bonds help investors diversify a portfolio. **Diversification** means to spread your investments across different types of assets as a way to manage financial risk.

You can create diversification by developing a basic asset allocation strategy. **Asset allocation** is an approach in which you include different investments into one portfolio.

- When you include assets that have different expected returns and different risk characteristics (the assets move up and down in value under different market conditions), you can protect yourself against significant financial losses (see **Helpful Hint**).
- By spreading your investment money across more than one asset category, you can reduce risk (uncertainty and volatility) and improve your overall investment returns.
- A typical asset allocation strategy for a novice investor, as shown in **Illustration 8.3.1**, is to hold 85% of his or her assets in stocks, 10% in bonds, and 5% in highly liquid assets such as cash.

HELPFUL HINT

Historically, the returns of the three major asset categories—stocks, bonds, and cash—have not moved up and down at the same time. For example, market conditions that cause stocks to do well often cause cash and other assets to generate average or poor returns. Conversely, conditions that cause stocks to go down often help bonds move up in value.

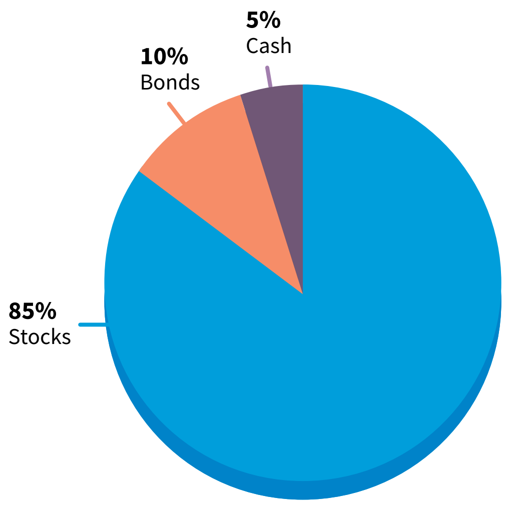


ILLUSTRATION 8.3.1

Example Diversification Through Long-Term Asset Allocation

Remember, asset allocation involves spreading your investment assets among different asset categories, such as stocks, bonds, and cash. You should also own a variety of investments within each category. The process of determining what mix of assets to hold in your portfolio is a personal one (see **Helpful Hint**). You should consider your time horizon when creating an asset allocation. The longer you have, the more risk you can take, which means you can place more assets into stocks. The decision, however, needs to be dampened by your risk tolerance, which is your willingness to invest when the outcomes of the decision are both unknown and potentially negative. If you have a low risk tolerance, you should own more bonds and hold more in cash.

HELPFUL HINT

The asset allocation that works best for you at any given point in your lifetime financial journey will depend largely on your time horizon and your ability to tolerate risk.

Why Are Bonds Less Risky?

Why are bonds generally less risky than stocks? Consider that all of the profits of a corporation belong to the shareholders only *after* all of the debts of the corporation have been paid. Bonds are considered debt, which means that bond investors need to be paid *before* shareholders receive any of the profits.

If a company has just enough money to either make an interest payment to its bondholders or make a dividend payment to its stockholders, the company must proceed as follows:

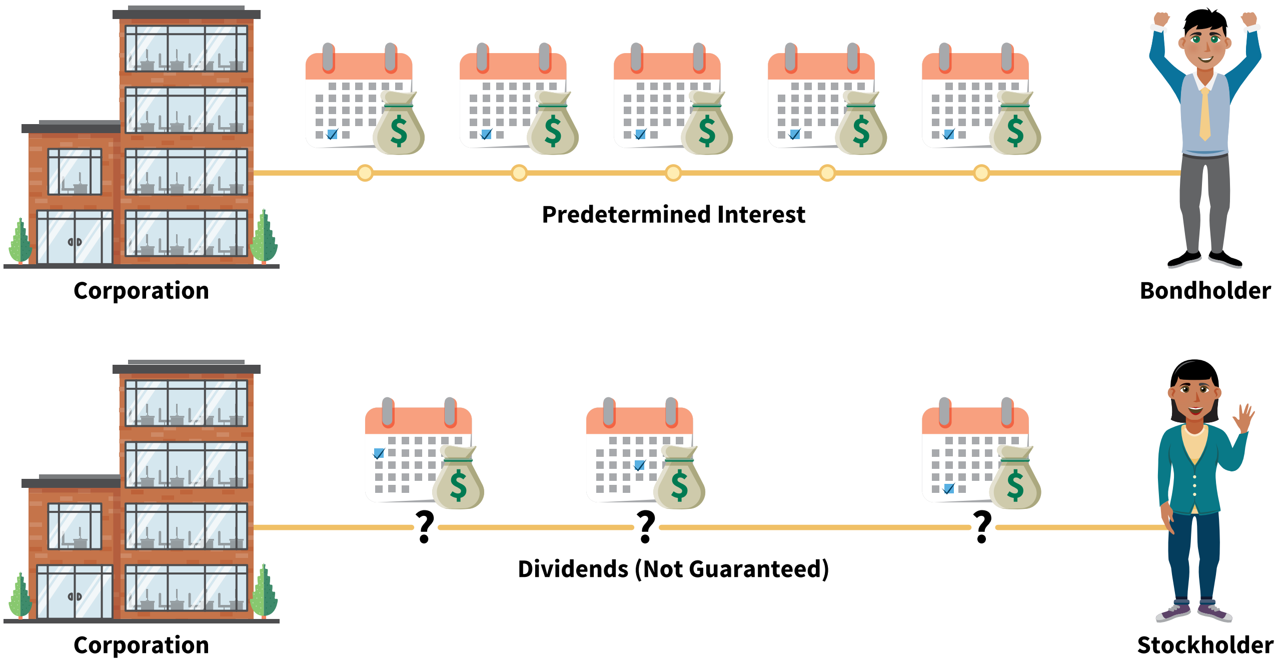
1. The company must first make the interest payment to the bondholders.
2. If a company cannot repay all of its debt and only pay back a portion of the money it has borrowed, then the lenders—the bondholders—will be first in line to receive part of their money and interest. They may even be able to take over the company if this happens.
3. Shareholders receive any funds remaining, which may be nothing.

Bonds probably seem like a good low-risk investment, right? But before you invest in bonds, you should have a good understanding of how the investment works. Let's look at bonds in more detail.

Bond Features

When you buy a bond, you are purchasing a legal contract for a series of predetermined future payments. As shown in **Illustration 8.3.2**, bondholders receive these payments in the form of interest. Stockholders, on the other hand, have no guarantees. Stockholders are entitled to dividends only if, and when, a firm's board of directors decides to make a payment.

ILLUSTRATION 8.3.2 **Corporation Distribution of Interest and Dividends to Investors**



For a bondholder, future payments, which come in the form of interest, are determined by the following bond features.

- The **face value** (or **par value**) of the bond: the amount of money that the bond issuer (the borrowing corporation or government) will pay to the bondholder (the investor lending the money) on the maturity date. Typical par values are $1,000 or $100.
- The **maturity date** of the bond: the length of the loan contract, which can be days, months, years, or several decades into the future. Just like a stock, you can sell a bond at any time before it matures. Remember, though, that if you sell a bond before it matures, then you will receive the fair market value of the bond (the price that you can sell the bond to another investor), not the face value, which most likely will be different than your initial investment.
- The **coupon rate** of the bond: the contractual interest rate that the bond issuer has agreed to pay the bondholder (see **Helpful Hint**). Coupon rates can be fixed or variable over the life of the bond.
- The **coupon payment** for the bond: the dollar amount of interest that the bond issuer will pay the bondholder. Coupon payments generally occur twice per year, but they may be more or less frequent.

HELPFUL HINT

Coupon rates are also referred to as contract rates.

Annual coupon payment amounts are calculated by multiplying the coupon rate by the face value, using the following formula:

Coupon Rate × Face Value = Coupon Payment

For example, assume a bond has a $1,000 face value. If the bond has a stated coupon rate of 4%, the bond issuer will pay the bondholder $40 per year until the bond matures. The $40 is the coupon payment. When the bond matures, the bondholder will receive the original $1,000

investment back. If interest is paid more than once per year, say, every 6 months, then the coupon payment is $20, determined as follows.

$$\left(\frac{\textbf{Coupon Rate } (.04)}{\textbf{Number of Payments per Year } (2)}\right) \times \textbf{Face Value } (\$1{,}000) = \textbf{Coupon Payment } (\$20)$$

Types of Bonds

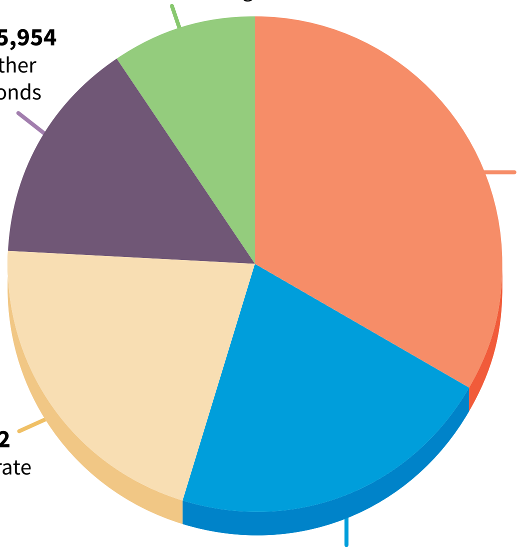
As an investor, you can purchase corporate bonds, U.S. federal government bonds, foreign government bonds, or even state and local government bonds. The value of the global bond market is approximately $100 trillion. The size of the U.S. bond market is approximately $40 trillion (see **Helpful Hint**). **Illustration 8.3.3** shows the composition of the U.S. bond market.

HELPFUL HINT

The global bond market is much larger than the global stock market.

ILLUSTRATION 8.3.3

Composition of the U.S. Bond Market (in Billions)



Source: Data adapted from The Securities Industry and Financial Markets Association, "Bond Markets & Prices," http://www.investinginbonds.com/marketataglance.asp?catid=31.

Corporate Bonds

Corporate bonds generally offer investors a higher coupon rate and often a longer maturity date compared to other bonds. Corporate bonds are generally considered to be riskier investments than government bonds because the government can print additional money or increase taxes to repay its debts. The following discussion, although focused on government bonds, applies to all types of bonds generally. However, note that some types of corporate and government agency bonds are beyond the scope of this discussion and are addressed in more advanced courses.

Federal Government Bonds

Federal government bonds are similar to U.S. savings bonds but different in significant ways.

- The U.S. Treasury Department is responsible for selling most federal government bonds to investors.
- Treasury securities have maturity dates ranging from less than 1 year to 30 years. Securities with a maturity date of 1 year or less are called **Treasury bills** or **T-bills**.
- T-bills do not have coupon payments. Instead, T-bills are purchased at a discount from face value, with the interest earned being the increase in value from the purchase price

HELPFUL HINT

Interest earned from federal government bonds is tax-free at the state level.

to the face value over the holding period (see **Helpful Hint**). These are called **zero coupon bonds** because the bondholder does not receive interest directly (there is no coupon payment).

- **Treasury notes** have a maturity date between 1 and 10 years, whereas **Treasury bonds** have a maturity date between 10 and 30 years from the date of issuance. Both Treasury notes and Treasury bonds make semiannual coupon payments.

Unlike companies that can sell stock or bonds to raise money for new projects and factories, governments rely on taxes and borrowing to raise money for projects. The U.S. federal government borrows money through Treasury securities (T-bills, T-notes, and T-bonds) to pay for all types of services, including building and maintaining roads, funding the military, and paying government benefits such as Social Security and Medicare. Currently, the U.S. government has borrowed approximately $16 trillion from individuals, institutional investors (companies), and other countries. The U.S. Treasury has also borrowed an additional $5 trillion from other federal government agencies.

State and Local Government Bonds

States, counties, and cities also borrow money. Current tax law makes it attractive for some investors to purchase bonds from state and local governments. Bonds issued by states and local governments are called **municipal bonds**. Here are a few things to remember about municipal bonds:

HELPFUL HINT

For investors in high-tax brackets, tax-free interest income is desirable. Because the interest is tax-free, however, the interest rate on municipal bonds is generally much lower than the interest rate on comparable taxable bonds.

- Funds are typically used to develop and maintain infrastructure (roads, buildings, parks, schools, and police and fire departments).
- Although these bonds are structured similarly to other fixed-income securities (that is, bonds), they have one distinguishing attribute: all interest earned from municipal bonds is considered to be **tax-exempt interest** at the federal level.
- Interest may also be tax-free in some states as well, depending on the bond issuer and where the taxpayer resides. Specifically, if you purchase a municipal bond from the state in which you live, the interest received will be both federal and state income-tax-free. This can be huge advantage for those living in high-tax states (see **Helpful Hint**).

For example, if you receive $1,000 in interest from a municipal bond, none of the interest is taxable on your Form 1040. This can make quite a difference for some people! You can use the **tax-equivalent interest rate formula** to determine if you should buy a municipal or fully taxable bond.

$$\textbf{Equivalent Taxable Bond Interest Rate} = \left(\frac{\textbf{Municipal Bond Interest Rate}}{\textbf{1} - \textbf{Marginal Tax Rate}}\right)$$

This formula can also be rewritten as follows.

$$\textbf{Equivalent Tax-Free Interest Rate} = \textbf{(Taxable Bond Interest Rate)} \times \textbf{(1} - \textbf{Marginal Tax Rate)}$$

Let's say that you are in the 25% marginal tax bracket and you can earn a 4% coupon rate from a municipal bond. This is equivalent to earning 5.33% [0.04 ÷ (1 – 0.25)] in a similar bond that is fully taxable.

Investing in Bonds

Although bonds are less risky than stocks, bonds are not risk-free investments. Knowing the risks and understanding how bonds are valued will help you to make wiser investments.

Bond Risks and Rating Agencies

Have you ever loaned money to a friend who failed to pay you back? The same can happen when you purchase a bond. The bond issuer may not pay you back because it goes bankrupt or becomes insolvent. The risk that a company or government may not be able to repay a bond is

called **default risk**. To help investors make better decisions about default risk, several independent businesses have been formed, called *rating agencies*.

A **rating agency** analyzes corporations and governments regarding their ability to repay debts. Two well-known rating agencies in the United States are **Standard & Poor's** and **Moody's**. These rating companies evaluate companies and governments as follows:

- Those that are deemed to have the highest probability of repaying their debts are rated as "AAA" (Standard & Poor's scale) or "Aaa" (Moody's scale).
- Those with low probabilities of repaying their debts are rated as "C."
- Those that are unable to repay their debts or interest payments are rated as "D" for default.

A company's credit rating can change from year to year.

However, a larger looming risk faces anyone who buys bonds: **inflation risk** (or **purchasing power risk**). There are few fixed rules when it comes to investing, but in the case of bonds, there is one absolute rule. Because most bonds pay a fixed coupon rate over time, *any* increase in prices in the general economy—inflation—will *erode* the purchasing power of the interest earned. It is important, therefore, to make sure that the interest received matches your investment need plus a bit more to cover current and expected inflation (see **Helpful Hint**).

HELPFUL HINT

The U.S. government sells inflation-protected bonds to help investors account for inflation risk.

In fact, most investors use a formulaic approach to determine the amount of interest they need to earn before investing:

Base Rate + Inflation Premium + Rating Premium + Other Adjustments = Interest Needed

1. Investors start with a base interest rate that they expect to earn for simply lending their money; this is often equal to the interest rate on U.S.-issued debt because U.S. securities are thought to be free of default risk.
2. They then add an inflation risk premium based on how long the bond will be outstanding and inflation expectations.
3. To this amount they then either add or subtract an amount to account for the quality of the bond. A lower-rated bond should generate a higher interest rate (this essentially accounts for default risk).
4. Investors then factor in other risks to determine the amount of interest they expect to earn before investing in a bond.

Bond Values

If you don't want to hold a bond until its maturity date, you may be able to sell it to another investor. The factors that will affect how much you will receive for the bond in the secondary market include current interest rates, the bond's coupon rate, and the bond's fair market value. The current market interest rates change over time based on economic conditions; however, the coupon (or contract) rate for existing bonds does not change (see **Helpful Hint**).

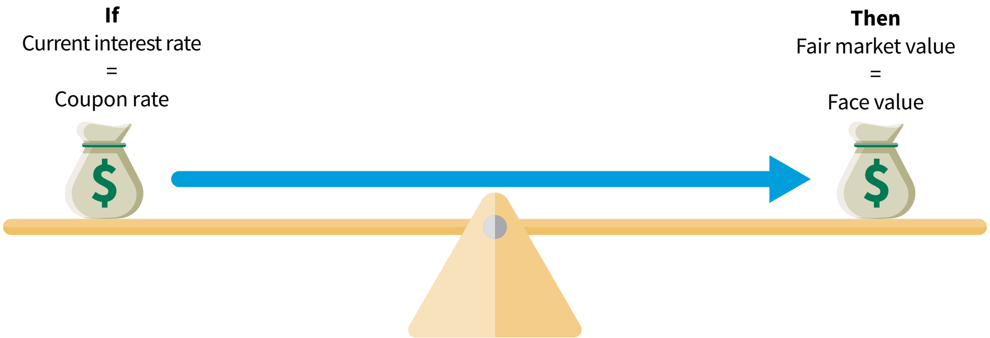
HELPFUL HINT

Changing interest rates in the economy relative to the coupon (or contract) rate of the bond lead to price fluctuations in the fair market value of the bond.

Illustration 8.3.4 shows the typical relationship between the current interest rate and the coupon rate, as well as the fair market value of a bond and its face value.

ILLUSTRATION 8.3.4

Current Interest Rate *Equal* to the Coupon Rate



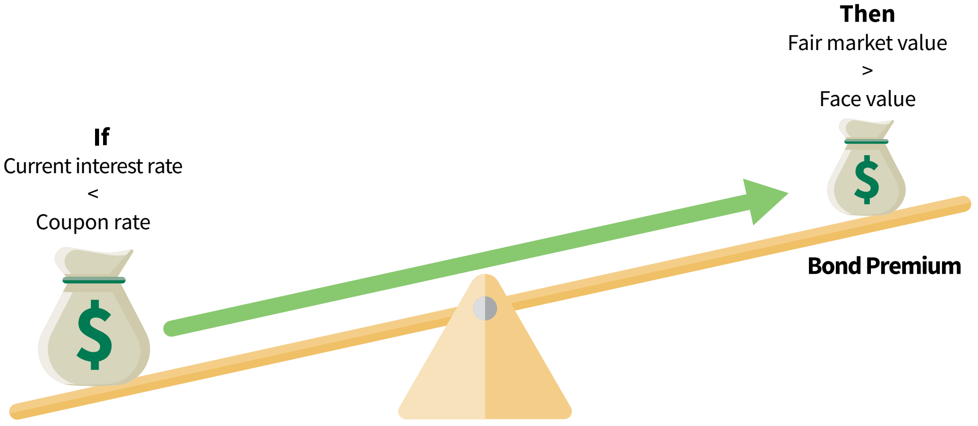
- Generally, at the time of original issuance, the coupon rate will be close to the current interest rate.
- As discussed, as time progresses from the original date of issue, it is likely that interest rates will change based on economic conditions. However, the coupon rate will generally not change over the life of the bond because the payment is part of the contract.
- Here is an important rule: *There is an inverse relationship between current interest rates and the fair market value of bonds* (see **Helpful Hint**). Thus, if current interest rates fall and are less than the coupon rate, then the fair market value of the bond will increase to an amount greater than the face value of the bond. This is illustrated in **Illustration 8.3.5**.

HELPFUL HINT

An inverse relationship means that the two factors move in opposite directions.

ILLUSTRATION 8.3.5

Current Interest Rate *Less* Than the Coupon Rate



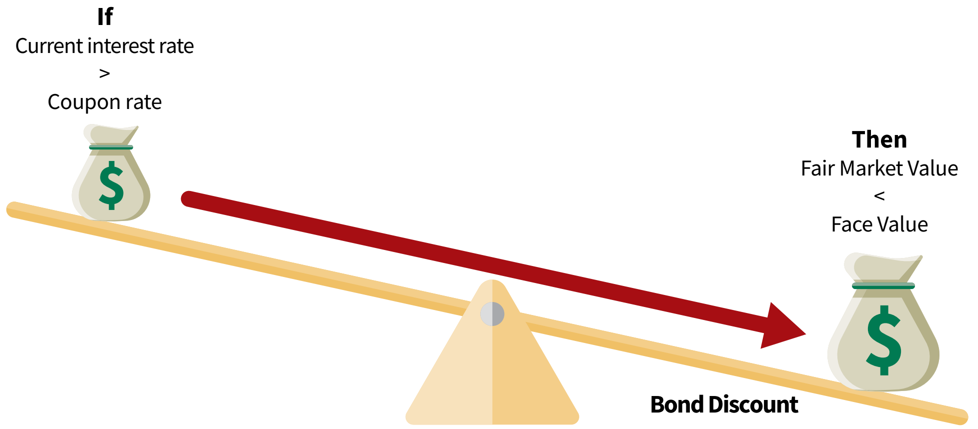
In this scenario, other investors are willing to pay you more for your bond because the coupon rate for the bond is higher than what investors can receive if they were to purchase a new bond at the lower current interest rate. As other investors pay you more than the face value for your bond, the **effective-interest rate** that they will earn decreases because the coupon payment remains the same, regardless of what is paid for the bond.

Illustration 8.3.6 shows the opposite scenario, when current interest rates are higher than the coupon rate of the bond. In this situation:

- Investors can earn a higher interest received rate by purchasing new bonds.
- Because the coupon payments are fixed, investors will pay less for your bond as a way to increase the rate of return from owning your bond.

ILLUSTRATION 8.3.6

Current Interest Rate *Greater* Than the Coupon Rate



- Thus, the fair market value of your bond will decrease until the rate of return earned by an investor who purchases the bond is approximately equal to the rate of return that the investor could earn by purchasing a new bond at face value with a coupon rate equal to the current interest rate.

Other factors, besides changes in interest rates, can influence the fair market value of a bond. For example, changes in a bond issuer's credit rating will significantly affect a bond's value. As a credit rating declines, the fair market value will decrease. If things get bad enough, a bond can be labeled a junk bond. A **junk bond** is one with a rating lower than BBB, which is an indication that the firm or government may have trouble making interest payments in the future. Junk bonds typically sell for less than higher-rated bonds.

Concepts in Action

It is possible to calculate how changes in interest rates will influence the fair market value of bonds. Using the time value of money (TVM) skills that you have already learned, you can do these calculations. Let's review how the math actually works. You will either need to use your TVM calculator or the following two formulas:

$$\text{Present Value: } PV = \frac{FV}{(1+i)^n}$$

$$\text{Present Value of an Annuity: } PVA_i = \frac{PMT}{i}\left[1 - \frac{1}{(1+i)^n}\right]$$

where PV is present value, FV is future value, i is interest, n is the number of periods, and PMT is payment.

Assume you can purchase a bond today for $1,000 that offers a 5% *annual* coupon rate. This means the bond pays $50 in interest one time per year. If market interest rates are 5% and the bond matures in 1 year, the bond will have a fair market value of $1,000. You can see this by combining the present value and present value of annuity formulas as follows.

$$\frac{\$1{,}000}{(1+.05)^1} + \frac{\$50}{.05}\left[1 - \frac{1}{(1+.05)^1}\right] = \$952.38 + \$47.62 = \$1{,}000.00$$

If you use a TVM calculator, the process is easy: $1,000 is the future value, $50 is the payment, 1 is the number of periods, and 5% is the interest rate. In this case, you are computing the present value.

Given that a bond is a contract with fixed payments based on the coupon rate, what will happen if investors in the market suddenly expect to earn 7% interest on the bond you own? This might happen because the overall interest rate in the economy has risen or the company that issued the bond has been downgraded and is deemed to be more risky.

Solution

Using the same formulas, the new market interest rate of 7% or 0.07 would be substituted for the 5% or 0.05, resulting in the following equation.

$$\frac{\$1{,}000}{(1+.07)^1} + \frac{\$50}{.07}\left[1 - \frac{1}{(1+.07)^1}\right] = \$934.58 + \$46.73 = \$981.31$$

The increase in market interest rates results in investors being only willing to pay $981.31 for the bond. An investor that paid $981.31 for the bond would receive the $50 coupon payment at the end of the year as well as the full face value of $1,000. Using TVM functions on your calculator,

you can solve for the effective-interest rate (or bond yield) that the investor would earn on this investment. Input $981.31 for PV, 1 for N, $1,000 for FV, and $50 for PMT, and then solve for the interest rate. Be sure to note that the payment happens at the end of the period. Investors should consider bonds—particularly bonds with a long maturity—if they believe interest rates will fall in the future. As interest rates fall, bond prices will increase, with long-maturity bonds increasing the most in value.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following is *true* if a company goes bankrupt?

   I. The bondholders are paid back first.

   II. The stockholders are paid back last.

   III. The stockholders must pool assets to pay back all bondholders.

   a. I only. **c.** I and II only.

   b. III only. **d.** I and III only.

2. **Calculate** If you invest $1,000 in a new bond issue and earn a coupon rate of 7% per year, how much will you receive when the bond matures?

   a. Nothing. **c.** $1,000.

   b. $70. **d.** $1,700.

3. **Calculate** What is the coupon payment for a bond with a face value of $1,000 that currently sells for $1,200 if the coupon rate is 6%?

   a. $60.

   b. $66.

   c. $72.

   d. There is not enough information available to answer this question.

4. **Calculate** Griffin recently purchased a bond for $1,100. The bond has a par value of $1,000 and a coupon rate of 5%. Based on this information, you know that Griffin's current effective-interest rate earned on the bond is ___________; when the bond matures, he will receive ___________.

   a. 4.55%; nothing

   b. 5.00%; $1,000

   c. 4.55%; $1,000

   d. 5.00%; $1,100

5. Mikki is currently in a high-income tax bracket. She would prefer to own an investment that generates tax-free income. If Mikki buys a municipal bond issued by a state other than her own, the interest she earns will be:

   a. tax-free at the federal level.

   b. taxable at the federal level but tax-free at the state level.

   c. taxable at both the state and federal level.

   d. considered a dividend and taxed at a maximum rate of 10% at the federal level.

6. **Calculate** What is the tax-equivalent interest rate needed if you can purchase a municipal bond with a face value of $10,000, a coupon rate of 3%, and a maturity date of 10 years? Assume you are in the 25% marginal federal tax bracket.

   a. 2.25%.

   b. 3.75%.

   c. 4.00%.

   d. 5.25%.

7. Imagine a period of time in the future when general prices in the economy begin to move up rapidly. The increase in prices results in inflation, which in turn causes interest rates to rise. When this happens, bond investors can expect:

   a. the value of their bonds to increase.

   b. the coupon rate of existing bonds to readjust upward.

   c. the value of their bonds to decrease.

   d. the par value of existing bonds to increase.

8. **Calculate** What is the fair market value of a bond with the following features: (a) par value of $1,000, (b) coupon payment of $80, and (c) 10-year maturity? Assume that current interest rates are 8%.

   a. $990.00.

   b. $1,000.00.

   c. $1,110.00.

   d. $1,400.50.

9. **Calculate** What is the fair market value of a bond with the following features: (a) par value of $1,000, (b) coupon payment of $70, and (c) 10-year maturity? Assume that current interest rates are 8%.

   a. $932.90.

   b. $1,000.00.

   c. $1,070.24.

   d. $1,110.00.

10. **Calculate** What is the fair market value of a bond with the following features: (a) par value of $1,000, (b) coupon payment of $40, and (c) 10-year maturity? Assume that current interest rates are 3%.

    a. $918.89.

    b. $1,000.00.

    c. $1,085.30.

    d. $1,110.00.

Adventures in Personal Finance

Short Answer

1. Match the following terms with the correct corresponding definition.

a. Coupon rate.
b. Inverse.
c. Coupon payment.
d. Face value.
e. Default risk.
f. Rating agency.
g. Municipal bond.

1. Analyzes corporations and governments as to their ability to repay their debts.
2. The amount of money that the bond issuer will pay to the bondholder on the maturity date.
3. The risk that the bond issuer may not be able to repay the bond.
4. The contractual amount of interest that the bond issuer will pay the bondholder.
5. Bonds issued by state and local governments.
6. The contractual interest rate that the bond issuer has agreed to pay the bondholder.
7. The relationship between changes in current interest rates and the fair market value of bonds.

2. **Calculate** If a bond is issued with a face value of $1,000 and a coupon rate of 5%:

a. What will the total annual coupon payment be?

b. If coupon payments are made twice per year, what will the semiannual coupon payment be for this bond?

3. Five years ago, Corporation XYZ issued bonds. At the time, its credit rating from Standard & Poor's was "BB." The coupon rate for XYZ's bonds was much higher than the coupon rate of better-rated bonds. Five years after issuing the bonds, the credit rating of XYZ had improved to "AA." If the bonds were still being traded in the market and interest rates were constant, how did the credit rating increase influence the fair market value of the bonds?

Explore

1. A bond's yield is the interest rate that investors would receive if they bought the bond at its current price. Search the Internet to get answers to the following questions.

a. What is the current yield on a 10-year U.S. Treasury note?

b. What is the current yield on a 1-year U.S. Treasury bill?

c. How do these yields compare to the interest rate that could be earned at your local bank or credit union on a savings account or CD? How do they compare to interest rates on online savings accounts?

2. Occasionally, the **U.S. Census Bureau** will compile the credit ratings of the individual states and major U.S. cities. Search the Internet for the phrase "census bureau bond ratings for state governments" to find the Census Bureau's published document titled, "Table 445: Bond Ratings for State Governments by State." Use this report to answer the following questions.

a. As of the most current year, which state has the lowest bond rating?

b. What is your state's bond rating?

c. As of the most current year, which major city had the lowest bond rating? What happened to this city (financially) to cause such a low rating?

3. **Writing** Visit the websites for Standard & Poor's and Moody's. Compare and contrast these rating agencies' approach to evaluating the quality of a bond issuer. Summarize the results of your research in a brief paper.

4. **Writing** Write a reaction paper (250 to 500 words in length) describing whether you agree or disagree with the following statement: Bonds issued by the U.S. government are risk-free.

Expanded Learning Activity

Calculate Calculate the fair market value of a 5-year bond that was issued with a face value of $1,000 and a coupon rate of 6% given the following different interest rates. What do your calculations indicate about the relationship between current interest rates and the value of bonds?

Face Value	Current Interest Rate	Payment	Maturity	Fair Market Value
$1,000.00	1.00%	$60.00	5	
$1,000.00	2.00%	$60.00	5	
$1,000.00	3.00%	$60.00	5	
$1,000.00	4.00%	$60.00	5	
$1,000.00	5.00%	$60.00	5	
$1,000.00	6.00%	$60.00	5	
$1,000.00	7.00%	$60.00	5	
$1,000.00	8.00%	$60.00	5	
$1,000.00	9.00%	$60.00	5	
$1,000.00	10.00%	$60.00	5	

Mutual Funds

LO 8.4 Identify the benefits and options that mutual funds provide to investors.

Over your lifetime financial journey, you will be constantly challenged to balance your need to generate high returns with the real possibility of losing money. This is called the *risk-and-return tradeoff*. As a result, you need to find a meaningful level of investment diversification that will help you build wealth while limiting your exposure to situations that can create chaos in your financial life.

How you choose to invest your money can be a difficult and time-consuming decision, especially if you have numerous options and uncertain outcomes. There are thousands of stocks trading in the United States and many thousands more listed in other countries. A problem is that the future of these companies is never certain. As a result, choosing individual stocks and bonds in which to invest can be a seemingly impossible task! Yet, as we discuss in this topic, there is a simple solution to this investment dilemma: purchase a mutual fund.

Overview of Mutual Funds

How Mutual Funds Work

Mutual funds are investments that pool individual investors' money for the purpose of:

1. Hiring a professional investment manager to make investment decisions.
2. Providing sufficient investment capital to purchase a large investment portfolio, thereby reducing some investment-related risk. An **investment portfolio** consists of individual stocks, bonds, and other assets that collectively represent the total investment assets of an individual or entity.

For example, let's say that John would like to invest $1,000 in stocks. John understands the importance of owning profitable companies for long-term wealth creation, but he may lack the interest, time, and expertise to carefully evaluate any of the individual stocks available for purchase. With only $1,000 to invest, he may also lack sufficient money to purchase the stocks he wants to buy. But what if there were 100,000 individuals in John's situation, each with $1,000? Collectively, they have $100,000,000 to invest. These investors could then use some of this money to hire a professional investment manager, who would then purchase a variety of stocks, bonds, and other assets. This is how a mutual fund works.

Diversification

A significant advantage associated with mutual funds is that funds offer individual investors with limited investment dollars the opportunity to diversify. **Diversification**, the process of purchasing a variety of different securities, is essential to successful investing. For example, let's say Lisa owns stock in Ocean Gold Company, an underwater gold exploration and mining company.

- If Ocean Gold finds and produces lots of gold, she can make a lot of money.
- If the company never finds gold and goes bankrupt, Lisa's stock will become worthless and she will lose all her investment.

Instead, what if Lisa owns a hundred different mining and natural resources companies and only 1% of her portfolio is invested in Ocean Gold Company (see **Helpful Hint**)? Now, if Ocean Gold goes bankrupt, Lisa will only lose 1% of her investment portfolio. Thus, diversification protects Lisa from catastrophic losses. **Illustration 8.4.1** shows what this would look like and the net effect if Ocean Gold were to go bankrupt in both scenarios.

HELPFUL HINT

Note that it is often a good idea to spread investments across firms operating throughout the entire economy rather than in one individual sector, such as mining and natural resources.

ILLUSTRATION 8.4.1 The Safety and Benefit of Diversification

Systematic Risk

Although diversification can reduce the volatility of investment returns over time, some risk will always remain because the overall economy can rarely be predicted with certainty. In other words, when you decide to become an investor, you take on the risk that the markets can go down. This risk, associated with the economic environment in general and which diversification *cannot* eliminate, is referred to as **systematic risk**. Risk that can be greatly reduced through diversification is called **unsystematic risk**.

The combination of systematic and unsystematic risk is termed **total risk**. Your goal, as an investor, is to reduce total risk to the maximum extent. This means adding more investment assets to your portfolio. Stated another way, you can reduce total risk by diversifying your portfolio. With proper diversification, you can eliminate almost all unsystematic risk! One easy way to do this is to purchase one or more mutual funds.

Mutual Fund Management

One reason to purchase a mutual fund is that investment managers have the time and expertise to manage the portfolio. There are many strategies that mutual fund managers use to generate investment returns for fund investors. These can be broadly grouped into two categories: (1) active management and (2) passive management.

Active Management

Actively managed mutual funds attempt to earn rates of return that are higher than the stock market rate of return for a given level of risk. You can purchase an actively managed mutual fund that mimics almost any type of individual stock, bond, or other investment in the marketplace. For simplicity, let's focus on stock mutual funds. Actively managed mutual funds can be classified in a variety of ways.

- Generally, mutual funds are classified by the size of the companies the fund invests in and whether the price of the stock relative to the company's earnings is expensive or a bargain (similar to a stock classification table). **Illustration 8.4.2** shows how mutual funds can be categorized this way.

ILLUSTRATION 8.4.2

Stock Mutual Fund Classification Based on Company Size and Price Valuation

	Large Market Cap (More than $10 billion)	Medium Market Cap ($2–$10 billion)	Small Market Cap (Less than $2 billion)
Value-oriented (bargain-priced stocks)	Large-cap bargain	Mid-cap bargain	Small-cap bargain
Combination of value and growth (fairly priced stocks)	Large-cap combination	Mid-cap combination	Small-cap combination
Growth-oriented (expensively priced stocks)	Large-cap expensive	Mid-cap expensive	Small-cap expensive

- **Value-oriented investors** look for underpriced stocks or bargains.
- **Growth-oriented investors** seek stocks where the share price is quickly increasing; these stocks tend to be more expensively priced.

Mutual funds may be invested based on other objectives, such as investing in specific industries or sectors of the economy (e.g., healthcare or telecommunications), in companies located in specific countries or geographic regions, in bonds, and in other fixed-income securities (see **Helpful Hint**).

HELPFUL HINT

Mutual funds can also be invested in other mutual funds to create a funds-of-funds mutual fund. As a result, one mutual fund may invest across many of the funds discussed here.

Passive Management

Passively managed mutual funds (also known as **index funds**), in contrast to those that are actively managed, seek to mirror the returns in the stock market.

- Passively managed mutual fund managers purchase stocks and other investments that mirror the stocks that are included in a market index. A **market index** is an unmanaged grouping of stocks that has been identified as representative of some aspect of the economy or stock or bond market. **Illustration 8.4.3** includes some common market indices and their description.
- By seeking to replicate a certain market index, passive mutual fund managers seek investment performance that is equal to the underlying market index.
- This strategy significantly reduces the cost to manage a portfolio, giving index funds a significant advantage over actively managed funds.

ILLUSTRATION 8.4.3

Common Indices and Descriptions

Standard & Poor's 500 Composite Stock Price Index	Stock Indices	• 500 stocks of leading U.S. companies. • Weighted-index based on company market capitalization. • Representative of large, fairly priced, and growth-oriented companies.
Russell 2000 Index	Stock Indices	• 2,000 smallest companies based on market capitalization. • Weighted-index based on market capitalization.
Dow Jones Industrial Average (DJIA)	Stock Indices	• 30 highly regarded U.S. stocks from a variety of sectors of the economy. • Not a good representation of the market or larger economy.
Barclays Capital U. S. Aggregate Bond Index	Bond Indices	• The broad bond market, including U.S. government bonds, corporate bonds, mortgage-backed securities, and foreign government bonds issued in the United States.

Source: U.S. Securities and Exchange Commission, "Market Indices," https://www.sec.gov/fast-answers/answersindiceshtm.html.

Comparing Management Methods

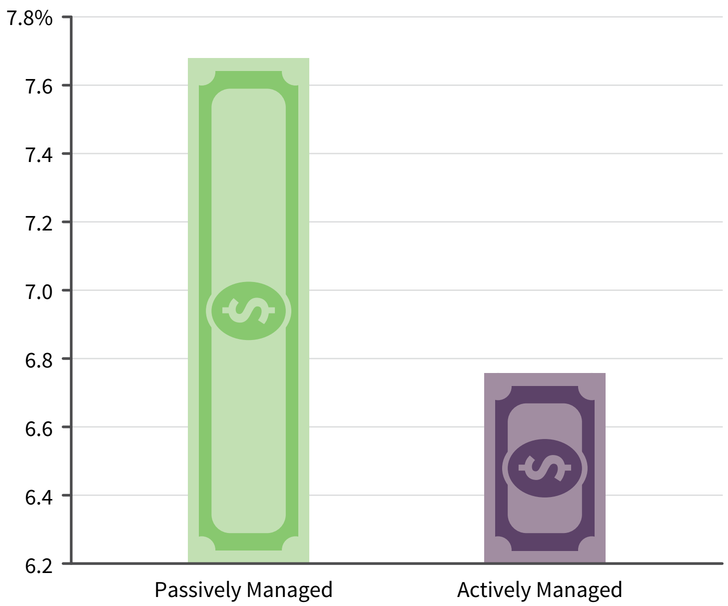
As an investor, you have more than 9,500 different mutual funds to choose from, which is more than the number of U.S.-based stocks available for purchase! How can you choose one mutual fund from the thousands available?

If one of the two investment strategies just discussed (active compared with passive management) is better than the other, you can eliminate quite a few mutual funds from consideration. Here is a question to ponder:

- What type of manager will likely give you a higher return on your investment, a manager that tries to earn higher rates of return than the stock market while taking the same risk, or a manager that attempts to simply mirror the return of the stock market?
- The answer is surprising. As shown in **Illustration 8.4.4**, over a 10-year period ending in 2016, the average returns in passively managed index funds tracking U.S. large-company stocks were higher than the average returns achieved by actively managed funds also investing in U.S. large-company stocks (see **Helpful Hint**).
- Passive investment managers trade less frequently and have lower investment research costs compared to active managers. These lower costs explain some of the difference in returns.

ILLUSTRATION 8.4.4

Comparison of Average Annualized Returns for Large-Company Passive and Actively Managed Mutual Funds



Source: Federal Reserve Bank of St. Louis, "Stock Market Indexes," https://fred.stlouisfed.org/categories/32255.

HELPFUL HINT

Remember, these are averages. Some mutual funds did better than the average, whereas others did worse.

What does this mean for you as an individual investor?

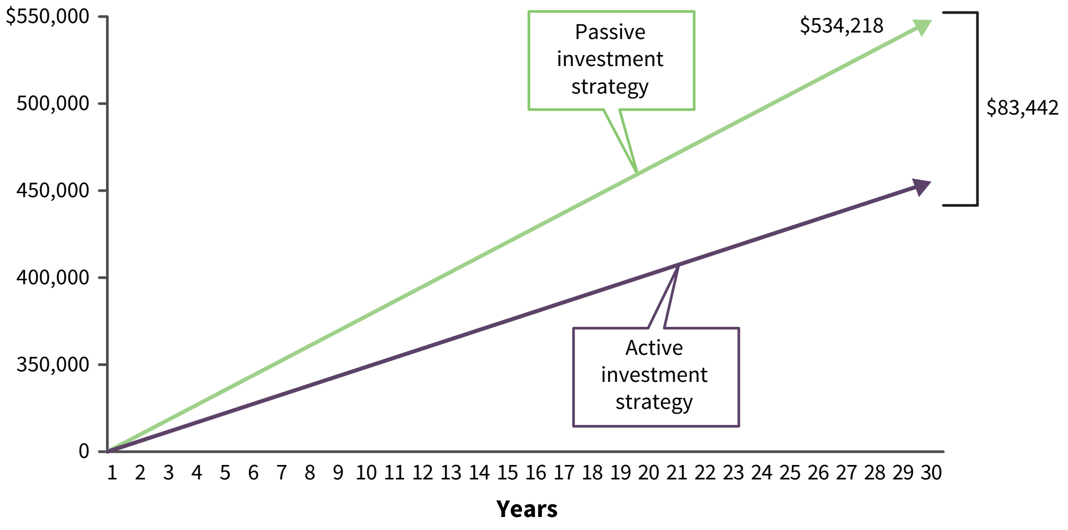
- The difference in returns between actively and passively managed mutual funds is less than 1% per year, but that 1% can make a big difference over time.
- **Illustration 8.4.5** shows that if you invest $5,000 per year for 30 years and can earn 7.68% (passively managed) compared to earning 6.74% (actively managed), you will end up with about $83,000 more.
- This means that a simple, low-cost, passive investment strategy will leave you with more wealth in the future.

Given the performance history of index funds, it is not surprising that investors of all levels of experience use index funds when creating investment portfolios. Although index mutual funds will not outperform all mutual funds, on average index funds have performed better than actively managed mutual funds over longer periods of time (see **Helpful Hint**).

HELPFUL HINT

If you don't want to spend too much time looking for a mutual fund, then index mutual funds can be a great option.

ILLUSTRATION 8.4.5 **Growth of $5,000 per Year over 30 Years**



Purchasing Mutual Funds

Even after you have narrowed down your mutual fund options, you still have many factors to weigh before making your investment decision. Consider that different investment companies offer index mutual funds. For example, **Fidelity**, **Schwab**, **T. Rowe Price**, and **Vanguard** all offer a mutual fund that tracks the S&P 500 index. Each fund holds the same basket of stocks. Often, the only significant difference between index funds is the fee charged to investors.

Fees

Few things are certain in the investment world, but here is one that is always guaranteed: Higher fees will result in lower returns for investors over time. Higher investment fees can cost you tens of thousands of dollars (and possibly much much more) over your lifetime. This can be enough to throw your lifetime financial journey off course. Here's what you want to do:

1. **Avoid sales-loaded mutual funds.** A **sales load** is a one-time commission paid to an investment salesperson either when a mutual fund is purchased or sold. **No-load mutual funds** do not charge a sales load, which saves you money.
2. **Avoid paying 12b-1 fees, if possible.** A **12b-1 fee** is an annual fund marketing expense that is passed on to shareholders in a mutual fund. Fees range from 0% to 0.20% and average around 0.13%.
3. **Buy the mutual fund with the lowest expense ratio.** A mutual fund's **expense ratio** is a measure of the total management fees and expenses charged by the mutual fund on an annual basis (including 12b-1 fees). The ratio expresses the percentage of the mutual fund assets that are used to pay these recurring expenses. Expense ratios range from less than 0.10% to more than 2.5%. The lower the expense, the higher your returns.

Keep in mind that the majority of mutual funds sold today charge a load. All mutual funds charge an annual management fee. Commission-based mutual funds typically are sold with one of three load structures:

1. **Class A shares**: These mutual funds charge a front-end sales load, but they tend to have a lower 12b-1 fee and lower annual expenses than other commission-based mutual funds.

Some mutual funds reduce the front-end load as the size of the investment increases. These discounts are called **breakpoints**.

2. **Class B shares**: These mutual funds typically do not have a front-end sales load. Instead, these funds charge a deferred sales load that is paid when you sell the fund. Most require investors to pay an annual 12b-1 fee and a higher annual management fee. The deferred load often decreases the longer you own the fund.
3. **Class C shares**: These funds charge a lower commission to purchase shares but generally charge a higher annual 12b-1 fee and other annual expenses.

Paying a load to purchase a mutual fund only makes sense if you are relying on the professional advice of a financial planner to help manage your portfolio. If you are going to make your own investment decisions or purchase mutual funds through an employer-provided retirement plan like a 401(k) plan, you will likely do better avoiding loads and high fees.

Illustration 8.4.6 compares five index mutual funds that track the S&P 500. Each fund had a similar 2016 1-year return. The average annual return since inception was different, but this just means that the funds started at different times (going forward, each fund's returns before fees will be similar). The most important information in Illustration 8.4.6 is the expense ratio.

HELPFUL HINT

It cannot be overstated: Index funds that charge the lowest fees will generally generate the highest returns for investors when compared to similar index funds.

- The XYZ fund charged nearly seven times more than ABC and MNO (plus a 5% commission [sales load]) to invest in the same basket of stocks.
- In contrast, ABC and MNO had the lowest expense ratios and also had the highest 1-year returns (see **Helpful Hint**).

ILLUSTRATION 8.4.6

Comparison of Index Mutual Fund Expense Ratios

Mutual Fund Name	Index It Follows	Expense Ratio	Maximum Sales Charge	1-Year Return	Average Annual Return since Inception
RST Price Equity Index 500 Fund	S&P 500	**0.21%**	None	**11.70%**	9.47%
ABC 500 Index Fund—Investor Class	S&P 500	**0.09%**	None	**11.87%**	10.15%
MNO S&P 500 Index	S&P 500	**0.03%**	None	**11.82%**	9.00%
JKL 500 Index Fund Investor Share	S&P 500	**0.14%**	None	**11.28%**	10.97%
XYZ S&P 500 Index Fund (Class A)	S&P 500	**0.66%**	5.0%	**11.21%**	6.87%

Mutual Fund Distributions

When you own a stock, bond, or other investment asset, you pay taxes only when you recognize a capital gain or receive interest or a dividend. Mutual funds are different. You may be required to pay taxes on mutual fund earnings even in years when you do not receive money from the mutual fund. This is a disadvantage associated with mutual fund ownership.

The current tax law requires mutual funds to distribute any net capital gains on the sale of portfolio securities to shareholders. When a mutual fund manager sells securities in the fund, this can trigger a tax liability for you. When a fund does distribute gains, you have several options:

- You can take the distribution directly and save or spend the money.

- You can reinvest the distribution in additional shares of the mutual fund.
- You can do a combination of these strategies.

Most investors, who are saving for a future goal, reinvest all distributions—interest, dividends, and capital gains—back into the mutual fund. This ensures that the power of compounding can be maximized (see **Helpful Hint**).

HELPFUL HINT

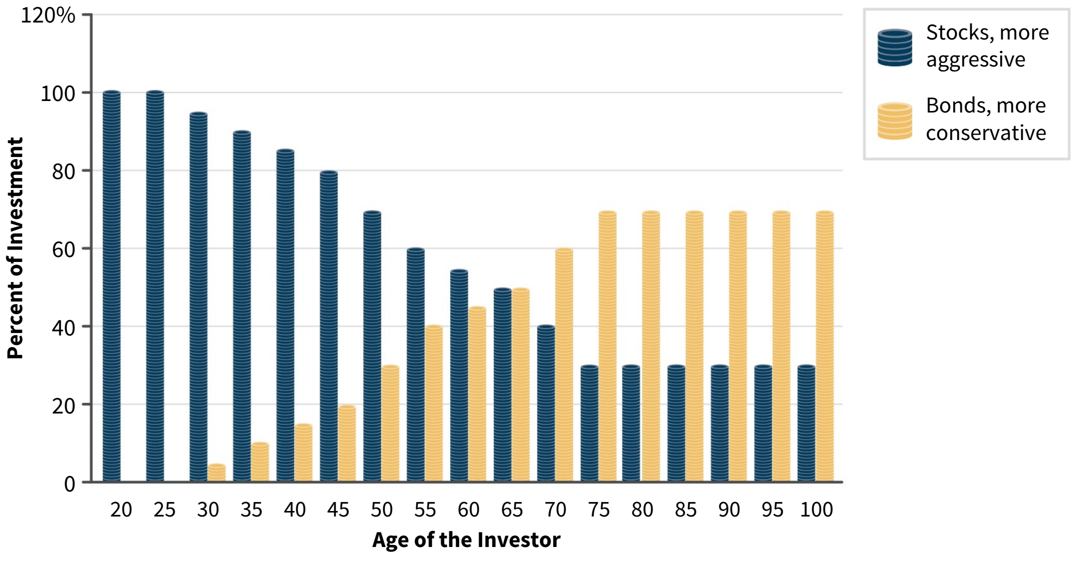
Keep in mind that no matter what you do with a mutual fund distribution, you must report the distribution for tax purposes.

Mutual Funds Investing in Other Mutual Funds

Although mutual funds decrease much of the unsystematic risk of the stock market, there are two specific mutual funds that offer even broader diversification.

1. **Asset allocation funds** invest in several other mutual funds based on a predetermined ratio of stocks (equities) and bonds. As such, asset allocation funds can be designed to better match individual investors' risk tolerance.
2. **Target date mutual funds** are a special type of asset allocation fund that are managed based on an individual's expected year of retirement. Unlike other mutual funds, the asset allocation in the fund changes over time and becomes less dependent on stocks and other risky assets as the target retirement date approaches. The rate and pattern at which the asset allocation shifts from more to less risky in a target date fund is referred to as the fund's **glide path** (see **Illustration 8.4.7**). The goal is to reduce return volatility as an investor grows older.

ILLUSTRATION 8.4.7 **Hypothetical Glide Path for a Target Date Fund**



Concepts in Action

Amber would like to start preparing for the future by investing now in a mutual fund. She can afford to invest $150 per month for her long-term goal of early retirement. But with so many mutual funds to choose from, Amber is feeling overwhelmed. How would you recommend that Amber get started toward her long-term goal?

Solution

Amber should choose to invest in target date funds. Amber should begin by searching the Internet for "best target date funds." From there, she can narrow her search and read reviews about some of the best target date funds. When evaluating the different funds, Amber needs to make some decisions.

First, does she want passively managed target date funds that invest in different market indices, or does she want to invest in actively managed target date funds? Passively managed funds over time will likely outperform the majority of actively managed target date funds. Additionally, passively managed target date funds will have lower expense ratios. Amber should look for target date funds that correspond most closely with her desired goal time frame. Amber should also investigate the target date fund's glide path to make sure that her risk tolerance matches the riskiness of the glide path. As Amber's wealth increases over time, it may be worthwhile to consult a professional and build her own portfolio using a variety of different mutual funds.

End-of-Topic Assessment

Multiple-Choice Questions

1. Approximately how many individual stocks can an investor choose from within the U.S. market?

a. Thousands.
c. Millions.
b. Hundreds of thousands.
d. A few hundred.

2. Which of the following are reasons why investors might choose to invest in mutual funds?

a. Diversification.

b. Professional management.

c. To pool capital with other investors.

d. Diversification, professional management, and to pool capital with other investors.

3. Systematic risk is best defined as:

a. portfolio risk.

b. the risk that always remains in a portfolio.

c. total risk.

d. diversifiable risk.

4. Mutual funds can be broadly classified into two categories:

I. Passive management.

II. Strategic management.

III. Active management.

IV. Tactical management.

a. I and IV only.

b. II and III only.

c. I and III only.

d. I and II only.

5. Which of the following best describes an index mutual fund?

a. Passively managed funds designed to mimic a specific market.

b. Mutual funds managed based on a person's anticipated year of retirement.

c. Mutual funds managed based on a preset ratio of stocks and bonds.

d. Mutual funds that attempt to earn rates of return that exceed the return of the market.

6. A market index is an unmanaged grouping of stocks that has been identified as representative of some aspect of the stock market. What is true of the Dow Jones Industrial Average?

a. The index is market weighted based on market capitalization.

b. It is designed to follow the broad bond market.

c. It is an actively managed index designed to outperform the market.

d. It consists of a small number of the most highly regarded U.S. stocks from a variety of sectors of the economy.

7. Common stock market indices include the:

a. Dow Jones Industrial Average.

b. Standard & Poor's 500 Composite Stock Price Index.

c. Russell 2000 Index.

d. Dow Jones Industrial Average, Standard & Poor's 500 Composite Stock Price Index, and Russell 2000 Index.

8. Over a recent 10-year period, passively managed large company mutual funds outperformed actively managed mutual funds by:

a. 0.94 percentage points.

b. 6.74 percentage points.

c. 7.68 percentage points.

d. 0 percentage points because there was no difference in performance.

9. Which of the following statements is *true*?

a. A sales load is a measure of the total management fees and expenses charged to a mutual fund.

b. No-load mutual funds do not charge an upfront sales load but do charge a back-end sales load.

c. A mutual fund's expense ratio is a commission paid to the mutual fund company.

d. A sales load is a one-time commission paid to an investment salesperson when the mutual fund is bought or sold.

10. If all of the following mutual funds are designed to passively mimic the S&P 500 stock index, then which mutual fund would be the best choice?

a. Mutual Fund A with an expense ratio of 0.28%.

b. Mutual Fund B with an expense ratio of 0.59%.

c. Mutual Fund C with an expense ratio of 0.07%.

d. Mutual Fund D with an expense ratio of 0.12%.

Adventures in Personal Finance

Short Answer

1. Eddy would like to get started investing for some long-term goals but has a limited amount of money to invest each month. Explain to Eddy the benefits of mutual funds compared to investing in individual stocks.

2. Explain the difference between actively managed mutual funds and passively managed mutual funds.

3. You would like to purchase an index mutual fund that tracks the S&P 500 index. You have identified five funds that all track the index well. What is the most significant fund feature that you should consider when choosing between these five funds?

Explore

1. **Vanguard** is a large mutual fund company that has led the mutual fund industry in developing low-cost index funds. Vanguard has also developed asset allocation funds using its index mutual funds. Go to the Vanguard website and look up the Life Strategy Asset Allocation funds.

a. Looking at the titles, which are more risky and less risky?

b. What is the asset allocation mix for each fund?

c. How many different index funds does each fund invest in?

2. If you were to call a mutual fund company and ask for advice on how to invest your money, you would only hear about its offerings. Instead, you may want some independent advice. Several magazines and newspapers rate mutual funds each year—generally actively managed ones. Some even suggest portfolios of specific mutual funds that investors with varying goals could purchase. Two such sources are *Kiplinger Magazine* and *U.S. News & World Report*.

Using an Internet search engine, search for "Kiplinger top mutual funds" and "U.S. News top mutual funds." Make sure you are looking at "large company growth" categories. Once you have both lists, compare and contrast the publication recommendations using the following questions as a guide.

a. Do each of the lists contain the same funds?

b. Why are some funds listed on one list and not the other list?

c. Which funds have the lowest expense ratios?

3. Go to the **Yahoo! Finance** website and type in the following mutual fund symbols separated by a comma: VFINX, FUSEX, SWPPX, SPIAX, and MDSRX. Each five-letter symbol represents an S&P 500 Index mutual fund offered by a different investment company.

a. What is the expense ratio for each of the index mutual funds?

b. Which of these index mutual funds charges a sales load?

c. Which of these mutual funds is the best one to purchase?

Expanded Learning Activity

Writing **Presentation** You may be ready to start investing for your long-term goals. If you have a limited amount of money to set aside for investing and want one mutual fund to meet all your investment goals, you might be looking for an asset allocation fund. The mutual fund industry has several different names to describe these funds, such as hybrid, balanced, or fund of funds, or they may refer to these funds as having a stated risk rating (e.g., conservative, moderate, and aggressive). Target date or lifecycle funds are unique types of asset allocation funds because their asset allocation changes as the target retirement date approaches.

a. Using an online search engine, visit a mutual fund company's website (such as **Vanguard**, **Fidelity**, or **T. Rowe Price**), and identify three different asset allocation funds being offered by the mutual fund company.

b. Compare the sales load, expense ratio, and 10-year average return for the three funds.

c. How many different mutual funds does each of the three asset allocation funds own?

d. Prepare a 1- to 2-page paper summarizing your findings in such a way that it will be useful to your classmates. Consider including a comparison table.

Exchange-Traded Funds

LO 8.5 Describe the advantages and use of exchange-traded funds compared with mutual funds.

Consider how odd it would be if you purchased a new car, used it for a while, and then decided you wanted to sell it and purchase a different one, *but* the only time that you could sell the car was at the end of each month and you had to sell it back to the car dealership where you purchased it. That is the case for mutual fund investors. You can only sell or buy shares in a mutual fund at the end of the trading day. Similarly, you can only sell mutual fund shares back to the company that originally sold the shares. However, just as the market for cars has expanded, so too has the financial marketplace. In this topic, we discuss another investment option: exchange-traded funds.

Limitations of Mutual Funds

It is easy to see why mutual funds are used by so many individual investors. Diversification, lower costs, and professional management are wonderful advantages offered by mutual funds (see **Helpful Hint**). Although mutual funds are an excellent choice for most investors, these funds also have limitations.

HELPFUL HINT

Mutual funds also tend to be a common investment choice within retirement plans, such as 401(k), 403(b), and 457 plans.

- Few actively managed mutual funds beat the performance of the markets over time. In fact, less than 25% of all mutual funds outperform simple market indices (e.g., S&P 500 and the Dow Jones Industrial Average) on an annual basis.
- Moreover, when you buy a mutual fund, you are limited to when and how you can buy and sell shares of the fund.

Let's look at these and other issues in more detail.

Mutual Fund Management Costs

The typical mutual fund is managed by a team of professionals known as **portfolio managers**. Although having a professional team helps you manage your money, there are two significant costs associated with hiring professionals:

1. Commissions on the purchase or sale of mutual funds (also known as *sales loads*).
2. Additional fees paid to the portfolio managers as compensation for managing the fund's assets.

Because of these higher costs, it is difficult for active portfolio managers to outperform similar index mutual funds or passive investment strategies. As **Illustration 8.5.1** shows, the average expense ratio for actively managed mutual funds can be three to four times what a passively managed mutual fund will charge.

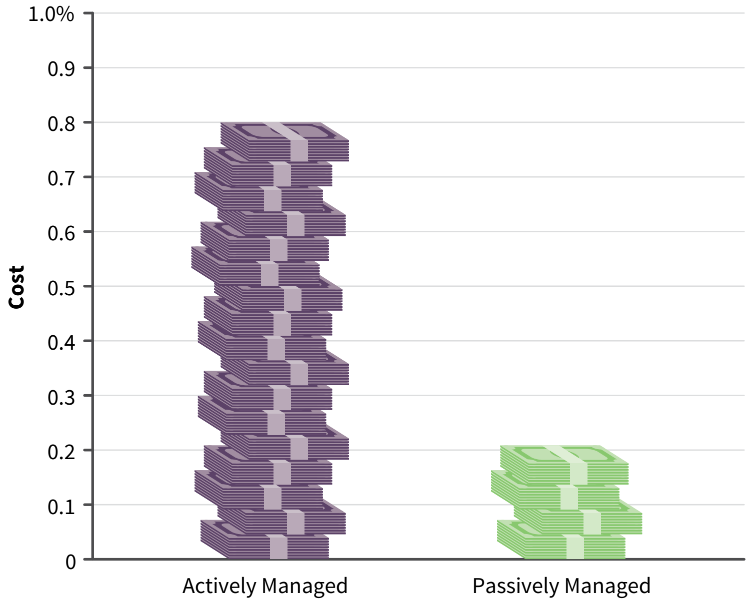
Trading Limits

Investors face another problem when buying or selling a mutual fund. Mutual funds can only be bought and sold once per day. Why is this an issue?

- The stock and bond markets are open from 9:30 AM to 4:00 PM (Eastern) every business day, but fund transactions generally occur only at 4:00 PM.
- This means that if the markets were to fall dramatically during the day, a mutual fund investor would not be allowed to liquidate his or her account quickly if needed.

ILLUSTRATION 8.5.1

Average Expense Ratios by Fund Type



Source: Sean Collins and James Duvall, "Trends in the Expenses and Fees of Funds, 2016," *ICI Research Perspective* (23, No. 3, May 2017). Available at www.ici.org/pdf/per23-03.pdf.

Although uncommon, sometimes a delay of several hours might result in a significant financial loss. Given this and other limitations associated with mutual funds, a relatively new type of investment has emerged that is changing the way investors allocate their money: exchange-traded funds.

Overview of Exchange-Traded Funds

HELPFUL HINT

You will need a brokerage account to purchase an ETF because ETFs trade like a stock rather than a mutual fund.

An **exchange-traded fund (ETF)** has all the features of a mutual fund, combined with the ease of buying and selling a stock (see **Helpful Hint**).

- You can buy and sell ETF shares throughout the trading day.
- Nearly all ETFs are index-based securities. An **index-based ETF** is similar to an index mutual fund in attempting to track the performance of a market index like the S&P 500. As such, ETFs are highly diversified investment options. One of the most popular index-based ETFs is called a "spider." This investment gets its name from its symbol, which is SPDR.
- The fee structure associated with ETFs is almost always lower than fees charged by mutual funds; in many instances, fees are even lower than the expense ratio for indexed funds.

Mutual Funds and ETFs Compared

As summarized in **Illustration 8.5.2**, ETFs look attractive when compared with mutual funds.

- The average mutual fund has an expense ratio of close to 0.8% ($^{8}/_{10}$ of 1%) annually, whereas ETFs typically charge less than 0.25% annually.
- ETFs offer investors the ability to control when to recognize capital gains on their ETF investment by choosing when to sell the investment. In contrast, mutual fund investors may have to include capital gains on their tax return because the mutual fund manager chose to sell appreciated securities within the mutual fund. When this happens, mutual fund shareholders must report the gains for tax purposes (even though the mutual fund shareholders did not sell mutual fund shares).

Investment Attribute	Mutual Funds	ETFs
Diversification	Yes	Yes
Professional active management	Yes	Limited
Option of indexing	Yes	Yes
Fees	Averages 0.8% annually	Averages less than 0.25%, generally very low
Costs to buy and sell	Maybe $0 if a no-load fund is purchased	A commission to buy and sell, ranging from $0 to $15
Investment minimum	$250 to $2,500 is common	If no commissions, no minimum investment; if commissions apply, approximately $2,500 to be cost-effective
Taxation	No control over capital gain distributions	Investor controls when capital gains are recognized by selling the ETF
Possibility of beating the market	Yes, if an actively managed fund is chosen	Generally no

ILLUSTRATION 8.5.2

Mutual Funds and ETFs Compared

Disadvantages of ETFs

As with everything, there are disadvantages associated with ETFs.

- Few ETFs are actively managed. This means that you can never beat the market index because most ETFs are designed to *match* (not beat) the performance of an index. Actively managed ETFs do exist, but these funds are unusual. An actively managed ETF will resemble an actively managed mutual fund in many respects, especially in terms of annual fees and costs.
- You may pay a commission (through your brokerage account, not a sales load) or be forced to buy shares at a small premium over **net asset value**—the per-share value of the ETF's assets minus its liabilities—whenever you buy an ETF, whereas some mutual funds can be purchased without cost (see **Helpful Hint**). (Some brokerage firms and ETF providers do offer ETFs without a commission or other upfront expense.)
- Because of the ease associated with buying and selling ETFs, investors can be tempted to engage in **market timing**, which is a strategy based on the belief that you or anyone can consistently determine highs and lows in the market before they occur. More often than not, this results in problematic financial outcomes.

HELPFUL HINT

If you are able to avoid a commission, then it can make sense to invest relatively small amounts in an ETF. Otherwise, you should have at least several thousand dollars available to invest before buying an ETF.

Why Use an ETF?

Appeal of ETFs

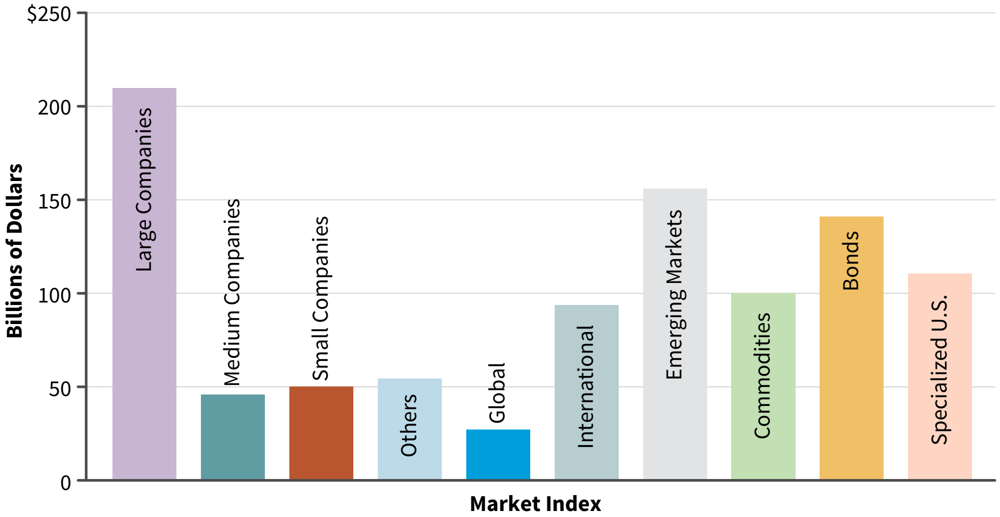
ETFs first appeared in the U.S. markets in 1993 when "spiders" were created by the American Stock Exchange and sold to investors as a way to track changes in the S&P 500. It did not take long before other ETFs were developed and marketed throughout the world. In 2001, there were 102 ETFs in the marketplace with net assets of $83 billion. By 2016, more than 1,200 ETFs were in existence with net assets totaling more than $1.5 trillion.

ETFs appeal primarily to investors who want to build a diversified portfolio with minimum costs. In general, ETF investors tend to be satisfied mirroring the stock markets, not beating the

markets. **Illustration 8.5.3** shows some of the most popular types of indices tracked by ETF investors, with an approximation of how much is held in different ETFs.

ILLUSTRATION 8.5.3

Most Popular ETF Markets



Source: Securities and Exchange Commission, "17 CFR Parts 239, 270, and 274," https://www.sec.gov/rules/proposed/2008/33-8901fr.pdf.

How to Buy an ETF

Buying an ETF is as easy as purchasing a share of stock.

HELPFUL HINT

To find a good ETF, there are many sites on the Internet that can provide the information you need.

1. Establish a low-cost brokerage account. You can do this online or through a financial advisor.
2. Deposit enough money in the brokerage account to fund the purchase of shares, plus commissions (if any) charged by the brokerage firm.
3. Find an ETF that matches your financial objective, time horizon, and tolerance for financial risk (see **Helpful Hint**). **Illustration 8.5.4** provides summary information for five of the largest ETFs in the world.

ILLUSTRATION 8.5.4

The Five Largest ETFs

Ticker Symbol	ETF Name	Assets	Purpose
SPY	SPDR S&P 500	$243,727,872	Tracks the S&P 500 Index
IVV	Core S&P 500 ETF	$124,993,434	Tracks the S&P 500 Index
VTI	Vanguard Total Stock Market	$82,101,299	Tracks all stocks traded in the United States
EFA	iShares MSCI EAFE	$79,412,378	Tracks stocks traded in European, Australian, and Far-Eastern markets
VOO	Vanguard S&P 500	$71,719,802	Tracks the S&P 500 Index

Source: "ETFs Assets Under Management," http://m.nasdaq.com/etfs/etf-list-by-classtype.aspx?type=assetsunder (September 2017).

ETFs may be a good investment choice because these investments allow you to buy a diversified portfolio of stocks (or almost any other asset). Fees and costs tend to be low as well, which means you keep more of your investment over time, thereby helping you reach your financial goals.

Concepts in Action

Janine has been saving for several years to have enough money to open a brokerage account so that she can begin investing for future goals (such as retirement). She has decided to purchase 10 shares in three ETFs as shown below.

	Price	Shares
SPY	$ 208.50	10
VTI	$ 107.00	10
EFA	$ 58.50	10

The brokerage firm that Janine has chosen charges $50 to purchase shares in each ETF. She knows that some online brokerage firms charge less than this, but she really likes the advisor she is working with and is willing to pay the fee. How much will it cost her to make the three trades? How much must the ETFs, as a portfolio, increase in value for her to break even after paying commissions? Rather than purchase shares in each ETF, what can she do to reduce her costs and maintain diversification?

Solution

As shown in the following table, Janine's total cost will be $3,890, of which $150 is commissions charged by the brokerage firm. As such, her investments must increase in value by 4.01% for her to cover the commissions charged and break even ($150 commissions ÷ $3,740 total cost).

	Price	Shares	Cost	Commission	Total
SPY	$208.50	10	$2,085	$ 50	$2,135
VTI	107.00	10	1,070	50	1,120
EFA	58.50	10	585	50	635
Total			**$3,740**	**$150**	**$3,890**

One way to reduce Janine's costs while maintaining adequate diversification is to use one or two ETFs rather than three. Indeed, there may be duplication among the three funds. She could, for example, allocate 75% of her portfolio to the VTI ETF. This will give her broad exposure to the U.S. equity markets. The remaining 25% could then be allocated to the EFA fund, which will provide her with exposure to international markets. She should definitely look for a less expensive way to implement her investment strategy. For example, if Janine utilizes an online brokerage firm that charges little or no commission, she will be increasing her wealth over time.

End-of-Topic Assessment

Multiple-Choice Questions

1. What helps explain the popularity of mutual funds?

   I. Mutual funds require a smaller initial investment than stocks or bonds.

   II. Mutual funds are a primary investment choice in retirement plans.

   III. Mutual funds frequently outperform market indices.

   a. II only.

   b. I and II only.

   c. II and III only.

   d. I, II, and III.

2. Lyle considers himself a gambler. He likes to do research on individual stocks, market sectors, and the stock market in general, and he likes to buy and sell based on breaking news. Lyle primarily invests in individual stocks and industry-specific mutual funds (i.e., healthcare

mutual funds or manufacturing mutual funds). He rarely buys ETFs. What specific advantage of ETFs over mutual funds is Lyle missing out on?

- **a.** Diversified portfolio.
- **b.** Ability to buy and sell at any time during the trading day.
- **c.** Low-expense ratios.
- **d.** Both low-expense ratios and the ability to buy and sell at any time during the trading day.

3. By purchasing one share of a market index ETF, an investor will own the equivalent of ____________ in his or her stock portfolio.

- **a.** one stock
- **b.** many stocks from the same industry
- **c.** many stocks from many industries
- **d.** None of these answer choices is correct.

4. Which of the following investment features is more common among mutual funds and less common among ETFs?

- **a.** Diversification.
- **b.** Low expenses.
- **c.** Professional active management.
- **d.** Wide variety of investment alternatives.

5. Which of the following investment features is typically associated with ETFs but not mutual funds?

- **a.** Funds provide investors with immediate diversification.
- **b.** Funds can be traded throughout the day.
- **c.** Funds can be purchased that match a market index.
- **d.** Funds are often actively managed.

6. As a novice investor, Laura is concerned about fees. She has heard stories of investors who have lost thousands of dollars in fees over time. She wants to invest in investments that generally have the lowest fees. Given her desire, Laura should focus on purchasing:

- **a.** actively managed mutual funds.
- **b.** index mutual funds.
- **c.** exchange-traded funds.
- **d.** both index mutual funds and exchange-traded funds.

7. Amy is just starting out investing and plans to invest $250 per month. She has no other investment money. She plans to pursue a passive investment strategy. Which of the following investment options would be best for Amy at this time?

- **a.** Actively managed mutual funds.
- **b.** Index mutual funds.
- **c.** Exchange-traded funds.
- **d.** Either index mutual funds or exchange-traded funds.

8. Ramos is an aggressive investor and likes to win at everything. He knows that it is nearly impossible to win or beat the average market return all of the time, but he wants to try! Given his attitude, Ramos should select what type of investment if his number one goal is to beat the market?

- **a.** Index mutual fund.
- **b.** Bond index ETF.
- **c.** Index-based ETF.
- **d.** Actively managed mutual fund.

9. Miguel is interested in a simple and easy to understand investment. He would like to buy an index-based investment that tracks the S&P 500. Which ETF should he choose?

- **a.** QQQ.
- **b.** IVV.
- **c.** EFA.
- **d.** SPY.

10. The largest ETFs are:

- **a.** index-based ETFs.
- **b.** actively managed ETFs.
- **c.** bond ETFs.
- **d.** international ETFs.

Adventures in Personal Finance

Short Answer

1. Liesel is developing a portfolio of individual stocks, mutual funds, and ETFs. She has created a list of three possible portfolios, as shown in the following table. Which portfolio will provide Liesel with the greatest level of diversification?

Portfolio 1	Portfolio 2	Portfolio 3
50% in a high-technology ETF	50% in S&P 500 ETF	20% in Boeing stock
20% in Google stock	20% in bond ETF	20% in Google stock
20% in Microsoft stock	15% in gold ETF	20% in Coke stock
10% in cash	10% in real estate ETF	20% in Ford stock
	5% in cash	20% in Target stock

2. Describe some of the advantages and disadvantages associated with investing in ETFs.

3. Jerald is new to investing. He has $1,000 in his checking account and has already established his emergency fund. Jerald is excited about the prospects of investing, but when it comes to selecting

individual securities, he gets nervous. He wants to be sure that a professional manager is looking over his portfolio. Given this information, which would be most appropriate for him: an ETF or an actively managed mutual fund? Briefly explain your answer.

Explore

1. **Writing** Visit the **Vanguard** ETF website by searching for "Vanguard ETF selection screen." Use the site to identify one or two ETFs that would meet the needs of an investor who wants (1) to focus on domestic stocks and (2) a very low-cost ETF (with an expense ratio of 0.50% or less). Write a brief summary of the ETF(s) you identify, and describe why the ETF(s) would be an attractive investment.
2. **Writing** Use an Internet browser to search for "ETF screener municipal bond" to identify one or two ETFs that invest in municipal bonds. Describe each fund in a brief report. Be sure to explain why someone might be interested in a municipal bond ETF.

Expanded Learning Activity

Presentation Information about ETFs is widely available on the Internet. However, before beginning research on ETFs, you should first develop a list of assets that appeal to you (e.g., stocks, bonds, commodities such as gold, real estate, or something totally different like currencies). After you have compiled your list, visit an ETF screening site to obtain a list of funds that meet your criteria. Select at least two of these funds and do more detailed research on how actively the ETF is traded, where it is traded, the cost involved (both commissions and annual fees), and what market index the fund tracks. Present your findings in class.

Domestic versus Foreign Investments

LO 8.6 Recognize the opportunities, benefits, and risks of investing internationally.

If you don't mind traveling, you can probably find a great beach any time throughout the year. This is because when it is winter in the Northern Hemisphere, it is summer in the Southern Hemisphere. Even if you stay in the Northern Hemisphere, you can still find lots of potential warm beach destinations during spring and fall.

Investing can be similar to beach hunting. The U.S. economy is the largest in the world but that does not mean that it is *always* the fastest-growing or the best investment location. In this topic, we discuss how expanding your investment search to include international opportunities can help create wealth.

Overview of Foreign Investments

Gross Domestic Product

Illustration 8.6.1 shows the annual percentage growth in **gross domestic product (GDP)**, a measure of how an economy is growing, for several countries in the world. The illustration also shows each country's GDP (in 2016). Note the significance of this data (see **Helpful Hint**).

ILLUSTRATION 8.6.1

Comparison of Selected Country GDP and GDP Growth Rates

Country	GDP	GDP Growth Rate (%)
India	$2.25 trillion	7.6%
China	$10.73 trillion	6.7%
Ireland	$307.9 billion	4.2%
South Korea	$1.41 trillion	2.7%
Mexico	$1.06 trillion	2.1%
United Kingdom	$2.65 trillion	1.8%
Germany	$3.50 trillion	1.7%
United States	$18.56 trillion	1.6%
Brazil	$1.77 trillion	−3.5%

Source: U.S. Central Intelligence Agency, "The World Fact Book."

HELPFUL HINT

Because some economies are growing while others might be shrinking, you should be diversified across your international investments.

- GDP grows at different rates for different countries.
- If GDP is growing rapidly, it is likely that there are companies that are growing very fast within the country as well; these could represent good investment opportunities.
- Sometimes GDP shrinks (a negative GDP); when this happens, investments in that country can go down quickly.

Overcoming Home Country Favoritism

Americans have a tendency to prefer U.S. investments and U.S. markets (most residents in other countries in the world have this same bias). This is known as home country bias, which is a form of **familiarity bias**.

- Investors basically like to own assets that they feel comfortable with.
- Few Americans are familiar, comfortable, or at ease with foreign investments.

However, those who hold this perspective put themselves at an investing disadvantage. More often than not, when people invest only in what they are comfortable owning, they lose opportunities for diversification and growth that come with other assets. This is especially true when it comes to foreign investments.

Why Foreign Investments?

It is somewhat surprising that Americans are uncomfortable putting their money into foreign investments. In general, Americans are totally at ease buying foreign-made products such as **Honda** automobiles, **Samsung** electronics, and **LG** appliances.

- The firms that make these products are not based in the United States.
- The only way to reap the opportunities associated with owning shares in these companies is to invest outside the United States.

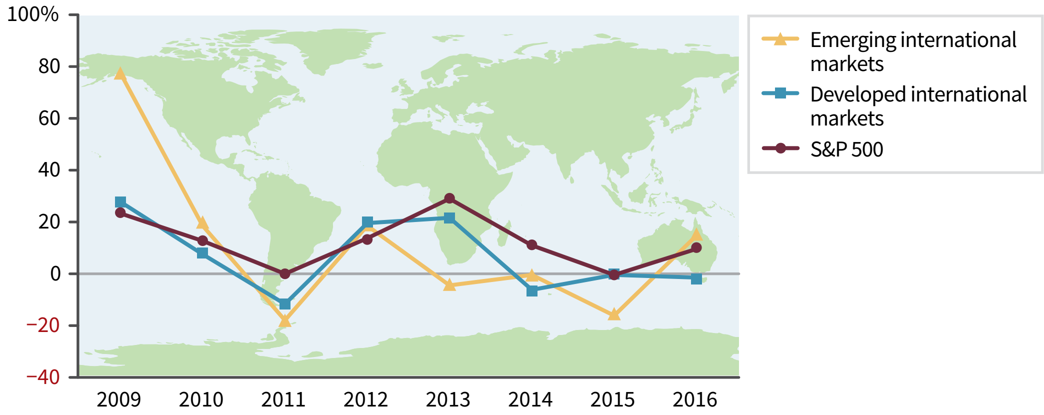
Advantages of Foreign Investments

Owning foreign investments can help your portfolio grow while reducing risks through diversification. Consider the association among investments using correlation statistics. If the price of two stocks moves exactly the same, the stocks have a correlation of 1.0. If, on the other hand, the stocks move perfectly opposite, then the correlation is −1.0.

Mathematically, risk is reduced when a portfolio consists of assets that are not highly correlated. Generally, the price of stocks traded overseas has a low correlation with stock prices in the United States. This means that U.S. and foreign stocks rarely move in the same direction over time.

- From January 2004 to September 2011, an index of developed international stock markets outperformed the S&P 500 index.
- From October 2011 to December 2016, the S&P 500 index outperformed most international stock market indices.

Illustration 8.6.2 shows the annual returns for **emerging international stock markets** (those markets where the economy is not as industrialized and per-person GDP is low), **developed international stock markets** (those markets where there is a high level of industrialization and high per-person GDP), and the U.S. stock market (as measured by the S&P 500 index). These markets often move in different directions.



Source: Federal Reserve Bank of St. Louis.

ILLUSTRATION 8.6.2

Comparison of Annual Returns for International Markets with the U.S. S&P 500 Index

Risks of Foreign Investments

Foreign investments are not risk-free. If you venture into the international arena, you need to take into account several factors before making an investment:

- **Currency exchange rates.** A simple currency exchange rule is that foreign stocks will generate a higher return for U.S. investors when the U.S. dollar declines in value against the stocks' home currency.
- **Different market operations.** Rules, regulations, and protections of investors vary by region and country.
- **High trading costs.** International markets generally are less liquid than the U.S. markets, which results in reduced investment **marketability**—a measure of how active and robust a market is for investments—and consequently higher costs to buy and sell (see **Helpful Hint**).
- **Less regulatory oversight.** A "buyer beware" attitude persists in many emerging markets.
- **Country risk.** Events like war, insurrection, sanctions, and expropriation can significantly increase risks and trading costs.

HELPFUL HINT

Some small emerging foreign markets lack marketability, which slows down how quickly transactions occur, thereby increasing costs.

For example, say that you would like to buy shares of **Samsung**, which trade on the South Korean stock exchange. Although this is possible, you might find the process of placing an order complicated and expensive. To avoid this process as well as high trading costs and exchange-rate issues, you might instead buy a mutual fund that includes shares of Samsung instead.

Buying Foreign Investments

Because of the difficulty of buying foreign investments directly, nearly all Americans gain access to these assets by buying:

- A mutual fund.
- An exchange-traded fund (ETF).
- **American Depositary Receipts (ADRs)**, which represent one or more shares of a foreign stock.

ADRs trade on U.S. stock exchanges just like most other stocks. ADRs make investing internationally easy and affordable for those wanting to own individual shares in specific companies.

Types of International Investments

You have four primary options when it comes to investing in stock in foreign markets using mutual funds and ETFs:

1. **Global funds** invest in foreign companies as well as U.S. firms.
2. **International funds** only invest outside the United States.
3. **Regional funds** invest in specific areas, such as Europe or Asia.
4. **Country funds** invest in specific countries, like China.

You may be able to use an ADR to directly purchase shares in some foreign companies. However, given the additional risks associated with investing in foreign countries, more diversified investment vehicles, such as mutual funds and ETFs, tend to be a smarter choice to get started.

A Global Marketplace

It is literally possible to buy and sell stocks from around the world 24 hours per day. When the markets are closed in the United States, for example, other markets are open in Asia. When the Asian markets close, those in Europe come alive, with the process beginning all over again five to six days a week. **Illustration 8.6.3** provides information about the 25 largest and most active stock markets, by country, as of 2016. Market capitalization for a stock market is the sum of the

market capitalizations of the individual stocks traded on a particular stock exchange. As this list illustrates, investors who fail to think globally end up leaving nearly 50% of all investment alternatives out of their portfolio.

ILLUSTRATION 8.6.3

Stock Markets of the World

Rank	Country	Market Value of Publicly Traded Shares
1	United States	$25,070,000,000,000
2	China	$ 7,321,000,000,000
3	European Union	$ 7,185,000,000,000
4	Japan	$ 4,895,000,000,000
5	Hong Kong	$ 3,185,000,000,000
6	United Kingdom	$ 3,019,000,000,000
7	Germany	$ 1,716,000,000,000
8	Canada	$ 1,593,000,000,000
9	France	$ 1,591,000,000,000
10	Switzerland	$ 1,519,000,000,000
11	India	$ 1,516,000,000,000
12	Korea, South	$ 1,231,000,000,000
13	Australia	$ 1,187,000,000,000
14	Taiwan	$ 851,200,000,000
15	Spain	$ 787,200,000,000
16	South Africa	$ 735,900,000,000
17	Singapore	$ 654,800,000,000
18	Netherlands	$ 652,700,000,000
19	Sweden	$ 560,500,000,000
20	Brazil	$ 490,500,000,000
21	Italy	$ 480,500,000,000
22	Saudi Arabia	$ 421,100,000,000
23	Belgium	$ 414,600,000,000
24	Mexico	$ 402,300,000,000
25	Russia	$ 393,200,000,000

Source: Central Intelligence Agency, "The World Fact Book."

It is important to remember that foreign investments also fluctuate based on currency exchange rates. An exchange rate is the amount of one currency that is equivalent to another currency. Exchange rates between currencies can either positively or negatively impact the value of foreign investments, depending on which way the currencies move relative to the U.S. dollar and the nature of the foreign investment.

Concepts in Action

In 2012, Kaylee returned from a trip to Brazil, where she saw everyone using the same wireless phone company, **Telefonica Brasil SA**. Kaylee thought that investing in this company would be an excellent addition to her investment portfolio, so she purchased some ADRs of Telefonica Brasil. The company continued to grow in Brazil and be profitable. On the Brazilian stock exchange, the value of each share increased from R$36.18 to R$47.86. Kaylee's instincts were right! However, during this same time period, the value of Kaylee's ADR for Telefonica Brasil (VIV) decreased in value from $27.84 per share to $14.79 per share. Over the same period, the value of the Brazilian real fell relative to the U.S. dollar. In 2012, R$1 equaled $0.54; by 2016, R$1 equaled $0.31. Kaylee is frustrated by this and thinks that someone stole her gains. How do you explain what happened to Kaylee?

Solution

Kaylee invested in a foreign stock using an ADR, which is a great strategy. The ADR is valued in U.S. dollars, but the foreign stock it represents is valued in the local currency (Brazilian real). The price of the stock did in fact increase on the Brazilian stock exchange. However, during the same time period, the value of the Brazilian real fell relative to the U.S. dollar, which resulted in the decline in the value of Kaylee's ADR share of Telefonica Brasil. Even though the value of the underlying company increased, Kaylee experienced currency exchange risk on her investment.

End-of-Topic Assessment

Multiple-Choice Questions

1. What of the following statements are *true*?

I. The U.S. economy, as measured by its GDP, is always the fastest-growing economy in the world.
II. GDP grows at different rates for different countries.
III. Some countries exhibit negative GDP.
IV. GDP growth rates are always positive, never negative.

- **a.** I and IV only.
- **b.** II and III only.
- **c.** I, II, and III only.
- **d.** I and II only.

2. What are the two largest economies in the world?

- **a.** United Kingdom and Germany.
- **b.** China and India.
- **c.** United States and China.
- **d.** Mexico and Ireland.

3. The tendency for people of any particular country to invest primarily in their own stock market is referred to as:

- **a.** a familiarity bias.
- **b.** an optimism bias.
- **c.** overconfidence.
- **d.** a status quo bias.

4. An advantage of investing internationally is:

- **a.** low correlation between U.S. stocks and international stocks, which reduces investment risk.
- **b.** the best investments are always overseas.
- **c.** low correlation reduces portfolio returns.
- **d.** reduced portfolio volatility and higher returns can be achieved by taking no additional risk.

5. The risks inherent in international investing include:

- **a.** currency exchange rate risk, less regulation, and reduced marketability.
- **b.** currency exchange rate risk.
- **c.** less regulatory oversight.
- **d.** reduced marketability.

6. Given a high tolerance for risk and a desire to invest internationally, investment in which type of countries could represent good investment opportunities?

- **a.** Countries with strong GDP growth.
- **b.** Countries with negative GDP growth.
- **c.** Countries with strong oversight and legal structure.
- **d.** Countries with strong GDP growth, oversight, and legal structure.

7. American Depositary Receipts:

I. represent one or more shares in a foreign company.
II. make international investing easy and affordable.
III. are a way to invest in foreign stocks directly.
IV. trade on U.S. exchanges.

- **a.** I, II, and III.
- **b.** I, II, and IV.
- **c.** I only.
- **d.** IV only.

8. Americans can gain access to foreign investments using:

- **a.** exchange-traded funds.
- **b.** American Depositary Receipts.
- **c.** mutual funds.
- **d.** exchange-traded funds, American Depositary Receipts, and mutual funds.

9. Which of the following mutual funds invests in both U.S. and foreign stocks?

- **a.** International fund.
- **b.** Global fund.
- **c.** Regional fund.
- **d.** Country fund.

10. A regional fund invests:

- **a.** in specific markets, such as Europe, Asia, or Pacific Rim.
- **b.** in foreign companies, as well as U.S. firms.
- **c.** only in firms outside the United States.
- **d.** to replicate the returns of the market.

Adventures in Personal Finance

Short Answer

1. Amanda just returned from a fantastic trip to Mexico, and she came away impressed with its growing manufacturing infrastructure. She's convinced that Mexico will continue to grow its manufacturing capacity and ultimately become an even bigger player. What are some of the ways Amanda could follow her hunch and invest in Mexico?

2. Describe the difference between global funds, international funds, regional funds, and country funds. Which type of fund do you feel would be best for someone just starting to invest who wants to have some exposure to international markets? Why?

3. John was excited to find that he could, through his brokerage account, invest on foreign stock exchanges. He was a little daunted when he found out the costs associated with investing directly on those exchanges were relatively high. He also was a little uncertain about the available information on the companies in which he was interested in investing. Other than investing directly on foreign exchanges, what are John's options for making investments in foreign companies?

Explore

1. Dean is enamored with BRIC investments. The so-called BRICs, an acronym coined by **Goldman Sachs** in 2001 for Brazil, Russia, India, and China, represented four countries that in 2009 accounted for a full 40% of the world's population and an estimated 25% of its GDP. These emerging market investments were the darling of the investment world a short time ago, until investors begun to understand the risks involved with investing in emerging markets.
   - **a.** What are some of Dean's risks if he decides to move forward with BRIC investments?
   - **b.** What are some of the ways that Dean's risks can be reduced, if he decides to move forward with BRIC investments?

2. The following lists five of the largest foreign companies that sell shares directly to investors through the use of an ADR. Complete the form by going to the **Yahoo! Finance** website and entering the stock symbol in the search box. Click on Profile under Company to find the U.S. stock exchange where the stock is listed and the firm's home country.

Company Name	Stock Symbol	U.S. Exchange	Home Country
HSBC Holdings plc	HSBC		
BP plc	BP		
Total SA	TOT		
Petrobras	PBR		
BHP Billiton	BHP		

Expanded Learning Activity

Make a list of 10 products that you own or use that are made by a foreign company. For example, look at your phone, the car you drive, what you are wearing, and what you will be eating for lunch. Conduct an Internet search for the companies on your list. Compile the following information about each firm in a report: (a) name of company, (b) stock symbol, (c) price of stock in U.S. dollars, (d) primary products produced or sold, and (e) home country. Good sources of information include **Yahoo! Finance**, **Google Finance**, and **Morningstar**.

Risks, Returns, and Investment Portfolios

LO 8.7 Discuss the expected relationships among risk, return, and marketability.

One word has continually popped up throughout this text: *risk*. We have talked about risk in relation to human capital, earning income, paying taxes, and buying insurance. Risk is also an important factor shaping your investment decisions. To be an investor, you need to take some financial risk—but at a level that matches your preferences and needs. This is one of the reasons why it is important to think strategically about the way you invest your money so that you can gain the advantages of diversification in pursuit of higher risk-adjusted returns.

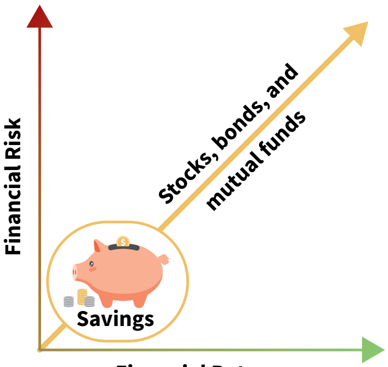
In this topic, we will discuss how risk can influence your ability to create one or more investment portfolios in pursuit of goal achievement. We start by introducing the three rules of risk.

The Three Rules of Risks

Risk can be defined in numerous ways. However, within the domain of investing, **financial risk** includes the possibility of gains and losses, as well as threats associated with losing purchasing power, business failure, and other negative events. You can think of **investment risk** as uncertainty or volatility relating to a particular investment. Investing in stocks, for instance, is risky because you cannot know for certain if your investment will turn out well or badly, nor can you predict how much you may gain or lose (although it is always possible to lose 100% of your investment). One of your investment objectives should therefore be to manage your decisions to maximize returns while minimizing risks. In this section, we review the three rules of risk that can help you in this regard.

ILLUSTRATION 8.7.1

The First Rule of Risk: Higher Financial Risks Are Associated with Higher Returns



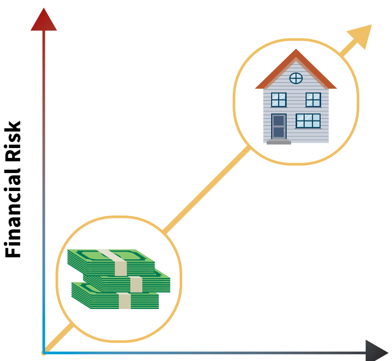
Rule 1: Greater Financial Risks Are Associated with Higher Expected Returns

To earn higher returns on your savings and investments, you must be willing to take calculated financial risks in the investment marketplace.

- The association between taking risks and obtaining returns in shown in **Illustration 8.7.1**.
- The relationship is positive. This means that you must be willing to move some of your savings and investment money out of safe, secure, and insured accounts into investments like stocks, bonds, mutual funds, and exchange-traded funds to generate higher returns. Remember, these are smart, well-diversified risks; you are not betting everything on one investment.

ILLUSTRATION 8.7.2

The Second Rule of Risk: Financial Risk Increases as Liquidity Risk Increases



Rule 2: Financial Risk Increases as Asset Liquidity Risk Increases

By taking increased risk, you will be giving up some of your liquidity. **Liquidity risk** refers to how quickly you can convert an asset to cash without a price concession or loss.

- Your most liquid asset is the money in your pocket.
- On the other end of the liquidity spectrum is real estate. It can take a long time to complete the sale of a property and then longer still to receive cash from the sale.
- Liquidity also includes your ability to hold onto an investment over long periods of time so that the long-term prospects of the investment can fully materialize.

By definition, as **Illustration 8.7.2** shows, as an asset's liquidity risk increases, so does financial risk. So back to Rule 1: if financial risk increases, so should the amount of return you expect, or demand, on your investment.

Rule 3: Financial Risk Increases as Marketability Risk Increases

It is always easier to buy something than it is to sell it (think about sports memorabilia and collectibles).

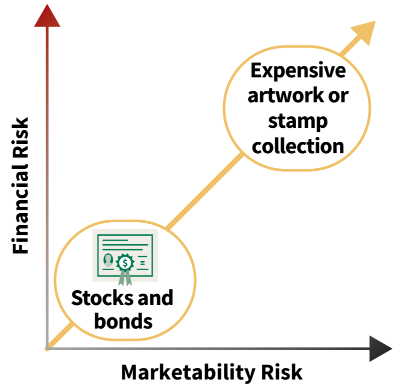
- Depending on the asset, it can sometimes take a long time to find a buyer.
- Depending on when you want to sell your investment, it may also seem unattractive to buyers (e.g., property insurance stock immediately following a hurricane or major natural disaster). But if you are able and willing to wait until the market for insurance stocks improves, you may get a much better price when selling.
- The sales process gets complicated because you can never be sure how much you can get others to pay for the things you own.
- This is why the marketability of assets is tied to risk.

As **Illustration 8.7.3** shows, **marketability risk**, or the ability to sell your asset relatively quickly and receive cash in a timely manner, can affect the riskiness of an investment. Here is what you need to know about investment marketability risk.

- The marketability risk of stocks and bonds is low. In fact, each securities exchange operating in the United States ensures that a market exists for most stocks and bonds. This is the reason some investors prefer U.S. stocks and bonds over other investment options.
- While stocks and bonds can be sold quickly, the price of a given stock may fall or increase quickly. This can happen when bad news about a company is first reported. While you can still sell your stock, the market for the stock may not be as strong as it was before the bad news. It may be best to wait, if possible, until the market for the stock improves.
- Assets that are bought and sold in lightly traded markets have more marketability risk. This risk creates special financial risks for investors.

ILLUSTRATION 8.7.3

The Third Rule of Risk: Financial Risk Increases as Marketability Risk Increases



Bringing the Rules Together

Essentially, to obtain higher returns, you must be willing to:

1. Take greater financial risk.
2. Sacrifice some liquidity (take on liquidity risk).
3. Give up some marketability (increase marketability risk).

On the other hand, just because an asset is liquid and marketable does not mean that you are guaranteed to make money. There is still a risk that a safer investment will not translate into profits, which is why investments in general will generate higher returns than savings options. So, before you start investing, you should definitely consider your overall tolerance for risk.

Concepts in Action

Jordan is searching for the investment world's ultimate product: an investment that offers low risk, high returns, high liquidity, and high marketability. She thinks she may have found such an investment: flipping houses. She just attended a real estate seminar that painted the following scenario.

Jordan can purchase rundown homes far below the market value of other houses in a given neighborhood. At the seminar, she learned about private lenders who will loan her 95% of the purchase price of a home for periods of 3 to 6 months. Depending on the home, the lender will charge between 6% and 9% interest and expect to be paid back within a specified (short) time period. She also learned that she should be able to renovate each house easily within 3 months and then sell the house for a much higher price. With just a modest amount of labor, she should be able to invest her money, renovate homes, put the houses on the market, sell them quickly, pay off the lender, and pocket the remainder. Although there is more work on the front end, Jordan believes that her risks are much lower than if she invested in mutual funds or exchange-traded funds. Is Jordan correct? Why or why not?

Solution

Unfortunately, flipping houses does not minimize any of the risk rules.

1. Flipping houses is risky. Renovation costs can easily outstrip her budget.

2. There is no guarantee that she can renovate homes in such a short time frame. If she were to miss her timeline, the lender will likely charge extra fees or foreclose on the properties.
3. Real estate is neither liquid nor highly marketable. Although it is true that in some locations homes sell quickly, it is rare to receive an all-cash offer for a home. The process involved in selling a home, especially if a mortgage is involved, can be quite long. It can take months to get paid.

Although Jordan should certainly consider flipping houses if her background and experience match the demands of the job, mutual funds or exchange-traded funds may actually present, over long periods of time, lower-risk and higher-return investments.

Risk Tolerance and Your Portfolio

The key to earning higher returns is being willing to take greater reasonable financial risks with your money. Recall that your willingness to engage in risky financial behavior in which the outcomes are both unknown and potentially negative is termed your **risk tolerance**. Your risk tolerance encompasses a wide range of attitudes, including your willingness to invest in assets with (1) liquidity risk and (2) marketability risk.

Let's see how you can match your financial risk tolerance with some specific investment options. First, you need some measure of your willingness to take risk.

Measuring Your Risk Tolerance

Your first step in measuring your risk tolerance is to indicate your level of agreement with the statements in **Illustration 8.7.4** (you may have completed this questionnaire previously).

ILLUSTRATION 8.7.4 **Financial Risk Tolerance Quiz**

What's Your Financial Risk Tolerance?

	Strongly Agree	Tend to Agree	Tend to Disagree	Strongly Disagree
1. Investing is too difficult to understand.				
2. I am more comfortable putting my money in a bank account than in the stock market.				
3. When I think of the word *risk*, the term *loss* comes to mind immediately.				
4. Making money in stocks and bonds is based on luck.				
5. In terms of investing, safety is more important than returns.				
Total:	____ × 1	____ × 2	____ × 3	____ × 4

Source: This scale was adapted from J. Grable and S. Joo, "A Further Examination of Financial Help-Seeking Behavior," *Financial Counseling and Planning* (*12*(1), 2001), pp. 56–66.

To calculate your risk-tolerance score, add up the points for each question. A score of 7 indicates a very low level of risk tolerance. An economist would say someone with this score is extremely risk-averse. A score of 18, on the other hand, is a sign of very high risk tolerance. A score between 11 and 14 represents middle-of-the-road risk tolerance (see **Helpful Hint**).

HELPFUL HINT

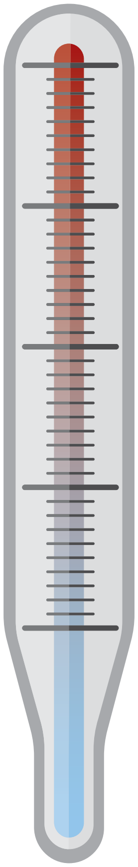
Don't worry about your score at this point. If your risk tolerance is on the low side, it is almost certain that, as your financial knowledge and experience increase, your risk tolerance will increase as well.

Matching Your Risk-Tolerance Score to Investment Alternatives

Once you know your risk-tolerance score, you can match it to the investments shown in **Illustration 8.7.5**. This illustration provides examples of investments discussed in this chapter, with a general approximation of the risk associated with each investment. Note that very high-risk-tolerant individuals may choose to invest in commodities, which are basic goods in the economy such as oil, food stocks, and precious metals. These can be very risky investments.

ILLUSTRATION 8.7.5

Risk Tolerance Matched with Investments



Risk-Tolerance (score)	Investment Asset
Very high (19–20)	Everything listed, plus other investment assets (commodities, collectibles, speculative stocks)
High (15–18)	Bonds, stocks, and real estate (junk bonds, medium- and small- company stocks, international stocks, investment real estate)
Moderate (11–14)	Bank products, bonds, and stocks (long-term CDs, investment -grade bonds, highly regarded and well-known stocks, balanced mutual funds, ETFs)
Low (7–10)	FDIC-insured bank products and bonds (short-term CDs, online savings accounts, savings bonds, Treasury bonds, highly rated corporate and municipal bonds)
Very low (5–6)	FDIC-insured bank products (savings accounts, money market savings accounts)

Keep in mind that this is just a starting point in the investment portfolio development process. For example, say that you score very low in terms of financial risk tolerance, which would match up with FDIC-insured bank products (see **Helpful Hint**). Here is what this means:

HELPFUL HINT

It is worth revisiting the risk-tolerance questionnaire at least every year. Most people find that their score moves progressively higher over time. When this happens, it is a confirmation that taking on more financial risk is appropriate.

- You should consider holding a portion of your assets in these investments until you gain more financial knowledge, experience, and confidence, as well as increase your capacity to take on more financial risk.
- **Financial capacity** refers to your financial ability to withstand a financial loss; someone just starting out on his or her lifetime financial journey (who has debt, little job security, and other financial obligations) will have less risk capacity than someone who is nearing retirement with several million dollars already saved for the future.
- Once experience, knowledge, confidence, and capacity start to increase, you should begin increasing the level of financial risk in your portfolio (this might take a few years

but just keep your eye on the future). This, in turn, will lead to larger financial gains over time.

Two caveats are worth mentioning at this point.

HELPFUL HINT

Your goal should be focused on building a diversified portfolio.

1. It is unlikely that you will ever be forced into choosing investments from just one category. It is much more likely that you will end up building an investment portfolio that includes investments from several categories (see **Helpful Hint**).
2. You must also consider your goals and time horizon when looking at the investment alternatives in Illustration 8.7.5. If you are young and saving for retirement, for example, you can afford to take on moderate, high, or even very high financial risk because you have the time to recoup financial losses. If, on the other hand, your goal is to save for a down payment on a house, you should look for investments that generate consistent returns with low levels of financial risk, regardless of your risk tolerance.

As you can tell, when it comes time to developing a portfolio, there is a lot to think about. Let's talk about some of these issues next.

Building a Portfolio

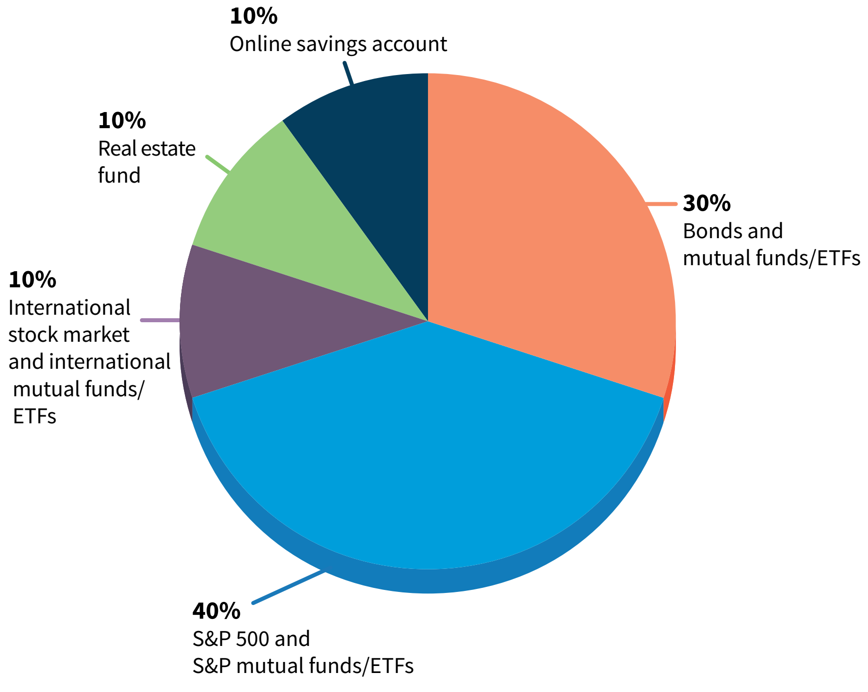
A **portfolio** is simply a grouping of investments, generally from a number of asset categories, into one place. This could be a retirement plan, a brokerage account, or a mixture of mutual funds or exchange-traded funds. When you build a portfolio, you should keep in mind the following.

- The overall weights within your portfolio should align with your financial risk-tolerance score. Weights are just the percentage of your total investment portfolio that is allocated to a specific type of investment.
- Factors such as your risk capacity and time horizon should then be used to moderate your portfolio asset choices.

For example, as **Illustration 8.7.6** shows, if you have a moderate risk tolerance and at least a 10-year time horizon, the weighting of your investment portfolio might be 10% in an online savings account, 30% in a bond mutual fund or ETF, 50% in stock-based mutual funds and ETFs, and 10% in real estate (not including your home).

ILLUSTRATION 8.7.6

Allocation of Assets Among Different Investments for a Moderate Risk Portfolio



When developing your portfolio, you should also consider other risks, such as volatility and inflation. We will discuss these concepts next.

Risks and Returns Revisited: Volatility and Inflation

Volatility

Risk generally means uncertainty or volatility. **Volatility** means how wildly **returns** fluctuate from period to period. **Illustration 8.7.7** shows an asset with returns that are relatively volatile. In some years, the asset went up dramatically; in other years, the asset decreased in value significantly.

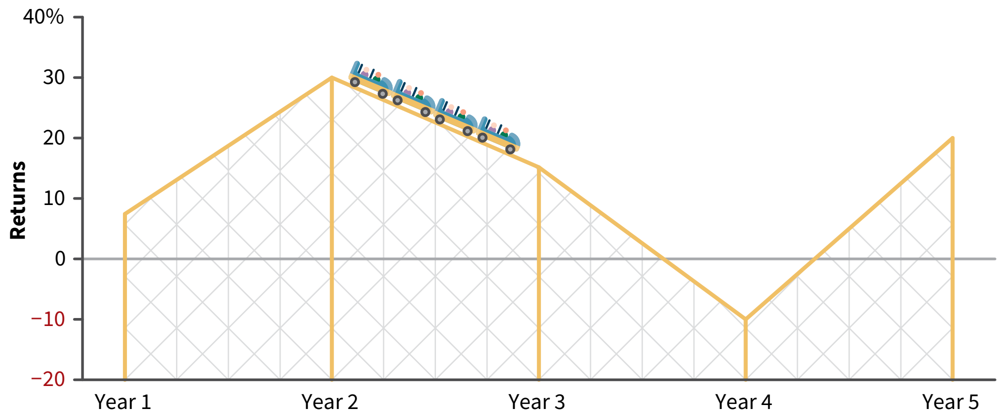


ILLUSTRATION 8.7.7

Relatively Volatile Investment Returns for a 5-Year Period

You can use a statistical term called **standard deviation** to measure volatility. Standard deviation tells you how far from the mean or average a potential return might be over time. For example, say that a mutual fund reports a 5-year average return of 10% with a standard deviation of 15%.

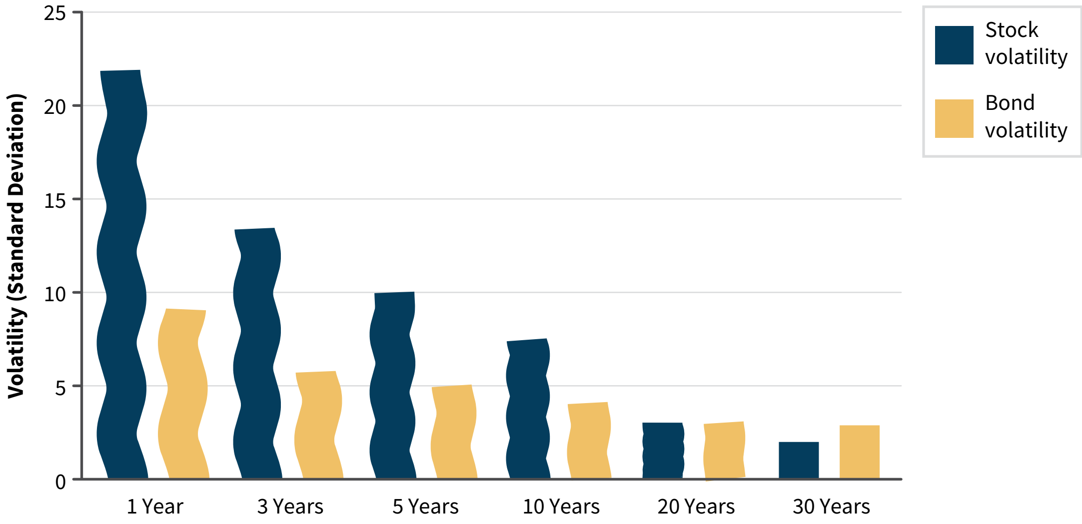
- Take the mean (10%) and subtract one standard deviation (15%) to find the potential downside. In this case, the downside is a 5% loss.
- To calculate the upside, take the mean (10%) and add one standard deviation (15%). The potential upside for this mutual fund is a 25% gain.
- To determine the probable returns 95% of the time, subtract or add two standard deviations to the mean. By doing this, you can see that 95% of the time, returns for the mutual fund will fall between −20% and 40%.
- You can be 99% sure in the range of outcomes by adding or subtracting three standard deviations to the average return. In this case, 99% of the time, the worse return you can expect is −35%; however, there is a possibility that the fund could return +55% in any given year.

If this level of volatility is acceptable to you, then this mutual fund might be a good choice for your portfolio. If, on the other hand, losing 35% in any given year makes you nervous, you might conclude that this mutual fund is too risky.

Before making your final decision, however, consider the data in **Illustration 8.7.8**. This chart shows that in any given year, the volatility associated with owning stocks is quite high—above 20%! Even holding bonds for just 1 year can be risky; the volatility is about half of that of stocks but still high. But look what happens as the holding period increases.

- At 5 years, the volatility associated with stocks and bonds gets cut by about half.
- After 20 years, the volatility associated with stocks and bonds is about the same.

ILLUSTRATION 8.7.8 **The Effect of Time on Decreasing Investment Volatility**



- If you can hold a stock portfolio for 30 years, something unbelievable happens: your actual realized holding period volatility is lower than it is for bonds (see **Helpful Hint**).

HELPFUL HINT

High volatility is rare; over time, average returns dampen the effects of large single-period swings in value. Also, over enough time, your portfolio is likely to grow, which makes the impact of fluctuations today seem modest in the future.

Inflation

Inflation is a measure of how much prices paid by consumers for goods and services change over time. Inflation, although it happens slowly, is actually a more powerful factor than volatility when it comes to your long-term investments.

- Your retirement investments, by definition, should be considered longer-term assets. It is therefore a mistake to worry too much about how much the price of an asset moves up and down over the short run (i.e., its volatility) (see **Helpful Hint**).
- Instead, you must invest so that your rate of return is (at least) equal to the rate of inflation, especially if you hope to make sure that your income keeps pace with inflation later in life.

HELPFUL HINT

If someone loses sleep because of volatility, she or he will have few alternatives other than keeping money in the bank. This is one of the worst investment moves you can make over the long run because of inflation risk.

Inflation generally happens so slowly that you hardly see it. One reason inflation is so elusive is that at any time some prices are increasing, some remain the same, and some prices fall. Think about tuition compared with the price of electronics. Tuition at colleges and universities has been increasing steadily for more than 30 years, while the cost of most household electronics has been declining steadily. Even so, prices of goods and services generally tend to increase over time. Economists are comfortable assuming that prices usually go up by about 2.5% to 3.0% per year. (Although rare, note that you may encounter deflation at some point during your lifetime financial journey. **Deflation** occurs when general prices decline.)

The **consumer price index (CPI)** is one measure that you can use to determine if inflation is occurring.

- **Illustration 8.7.9** shows how the price of several products and services changed over the period 1983–2017.
- If you are in college today, you will be disappointed (but probably not surprised) to learn that tuition has gone up by far more than the CPI inflation rate.

What does all this mean for you in the context of your lifetime financial journey? The answer is simple: If you earn less than the inflation rate on your investments, then you are falling behind in terms of purchasing power. This is the sure pathway to financial troubles in the future. You do have a solution, however: take smart risks with your investments to earn higher returns!

	Price in 1983	Inflation-Adjusted Price in 2017 (2.67% per year)	Actual Prices in 2017
Average cost of a home	$89,800	$218,945	$295,000
Price of a postage stamp	$ 0.20	$ 0.49	$ 0.49
Cost for a gallon of gas	$ 1.24	$ 3.02	$ 2.50
Price of a dozen eggs	$ 0.86	$ 2.10	$ 1.45
Tuition/room/board	$ 3,877	$ 9,453	$ 16,500
Median household income	$20,885	$ 50,920	$ 56,516

Source: www.bls.gov/data/inflation_calculator.htm.

ILLUSTRATION 8.7.9

Increased Prices Resulting from Inflation

End-of-Topic Assessment

Multiple-Choice Questions

1. Financial risk refers to:
   I. the possibility of financial loss.
   II. volatility of returns.
   III. the loss of purchasing power.
   - **a.** I only.
   - **b.** I and III.
   - **c.** II and III.
   - **d.** I, II, and III.

2. Which of the following assets has the least marketability risk?
   - **a.** Stocks traded on the New York Stock Exchange.
   - **b.** Rental real estate.
   - **c.** Gold held as collectible coins.
   - **d.** Municipal bonds.

3. In which of the following investment should someone with a very high risk tolerance be comfortable investing?
   I. Stocks.
   II. Bonds.
   III. Commodities.
   - **a.** I only.
   - **b.** III only.
   - **c.** I and II only.
   - **d.** I, II, and III.

4. Volatility refers to:
   - **a.** how liquid an investment becomes over time.
   - **b.** how wildly returns fluctuate over time.
   - **c.** the maximum expected loss someone can expect over time.
   - **d.** the degree to which purchasing power is lost as a result of inflation.

5. **Calculate** Wookjae has discovered a new mutual fund with a 3-year return and standard deviation of 9% and 14%, respectively. What is the worst possible return that Wookjae can expect 95% of the time if he invests in this mutual fund?
   - **a.** −5%.
   - **b.** −19%.
   - **c.** −23%.
   - **d.** −33%.

6. **Calculate** Wookjae has discovered a new mutual fund with a 3-year return and standard deviation of 9% and 14%, respectively. Wookjae would like to know, with a 99% certainty, the maximum return he might see in any given year. What is that number?
   - **a.** 14%.
   - **b.** 23%.
   - **c.** 37%.
   - **d.** 51%.

7. Wookjae has discovered a new mutual fund with a 3-year return and standard deviation of 9% and 14%, respectively. Which of the following statements is *true* regarding the mutual fund and Wookjae?
   I. This mutual fund is appropriate for Wookjae assuming his risk tolerance is low.
   II. This mutual fund is appropriate for Wookjae assuming his risk tolerance is high.
   III. The standard deviation of returns associated with this mutual fund indicates an investment with low marketability.
   - **a.** II only.
   - **b.** III only.
   - **c.** I and III only.
   - **d.** II and III only.

8. Holding all other factors constant, someone who is concerned about losing money should invest in assets that have a standard deviation:
   - **a.** greater than the average return of the investment.
   - **b.** greater than 10%.
   - **c.** less than the average return of the investment.
   - **d.** less than 10%.

9. **Calculate** Over a 30-year period, the price of an average home in the United States went from approximately $90,000 to $210,000. The rate of inflation over this time period is:
   - **a.** 2.86%.
   - **b.** 3.52%.
   - **c.** 4.84%.
   - **d.** 5.31%.

10. **Calculate** Assume that inflation averages 3.50% over the next 20 years. If Carlos invests $25,000 in an exchange-traded fund within a tax-deferred account and that investment grows to $45,000 at the end of 20 years, will he have maintained his purchasing power?
    - **a.** Yes, because the ETF is worth more than his original investment.
    - **b.** No, because he should have closer to $50,000 to keep pace with inflation.
    - **c.** Yes, because he only needed about $33,000 to keep pace with inflation.
    - **d.** There is not enough information to calculate the future value of his investment.

Adventures in Personal Finance

Short Answer

1. Describe the difference between liquidity and marketability.
2. Although most people equate risk with volatility and the possibility of losing money, what type of risk should they primarily be concerned about and why?
3. What is meant by risk tolerance?
4. Explain why an investor should expect a high rate of return as liquidity declines.
5. Your friend Carlotta has a total risk-tolerance score of 8. What types of investments would be most appropriate for her?
6. A number of key terms from this topic follow. Match each term with the correct definition from the list provided.

a. Financial risk.	**1.** How quickly you can convert an asset to cash.
b. Liquidity risk.	**2.** Volatility.
c. Marketability risk.	**3.** Your willingness to invest in an asset that may go down in value.
d. Risk tolerance.	**4.** The tendency for prices to increase over time in the economy.
e. Inflation.	**5.** The ability to sell an asset without fear that there will be few buyers.

Explore

1. **Calculate** Make a list of 10 products or services that you use on a regular basis. Make a note of the current price of each item on your list. Now search the Internet for a CPI inflation calculator to determine what that good or service cost the year you were born. Based on your calculations, what do you think these same items will cost 30 years from now?
2. **Writing** Visit the **Bureau of Labor Statistics** website. Search for CPI and then use the links provided to explore how prices for goods and services have increased or decreased since you were born. Write a brief response describing the overall change in prices across time.

Expanded Learning Activity

Writing **Presentation** **Illustration 8.7.10** depicts a $100 billion bill from Zimbabwe. In the early 2000s, $100 billion in Zimbabwe dollars would buy less than $1 worth of goods in U.S. dollars. Zimbabwe has even issued a $100 trillion note that is worth about $1.50 in U.S. currency. Conduct an Internet search to discover the reasons why the currency of Zimbabwe is basically worthless. Be sure to investigate how inflation has changed the lives of people living in Zimbabwe. Write the results of your research as a 2-page summary and share your insights with others in the class.

ILLUSTRATION 8.7.10

Zimbabwe Currency

Brokerage Accounts

LO 8.8 Describe brokerage accounts and the different types of brokerage firms.

If you have ever followed a weight-loss or general health program, you know the importance of regularly monitoring your progress. Similarly, when investing, you can monitor your progress toward your financial goals by understanding and reviewing your investment account statements. An important account (and statement) that you will need to understand is a brokerage account.

Choosing and opening a brokerage account is an essential step for those who are serious about developing diversified portfolios of investments. You can think of a brokerage account as a lifetime financial and investing tool. With this tool, you can buy and sell a wide variety of stocks, bonds, and ETFs. In some cases, you can also link banking services to your brokerage account, which makes this a great place to hold an emergency fund. In this topic, we highlight some of the important concepts behind brokerage accounts.

Overview of Brokerage Accounts

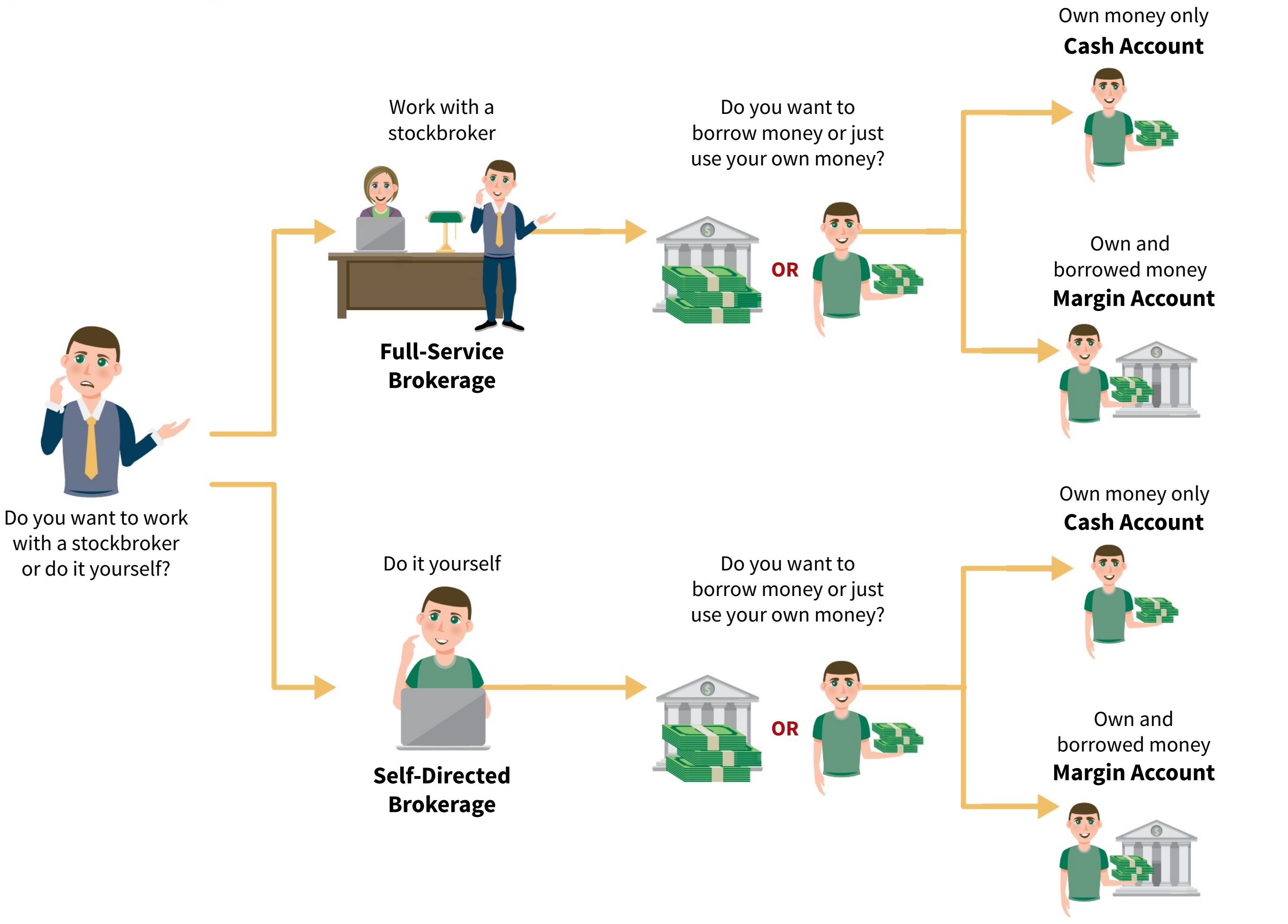
Choosing a Brokerage Account

A **brokerage account** is a prefunded arrangement between you and a broker–dealer firm that allows you to buy and sell investment assets (see **Helpful Hint**). **Illustration 8.8.1** shows the primary choices that you need to make in the account selection process.

HELPFUL HINT

The process of opening a brokerage account is relatively easy and similar to establishing an online bank account, with a few additional considerations.

ILLUSTRATION 8.8.1 **The Brokerage Selection Process**



First, you need to decide if you want to work with a broker or manage the assets in the account on your own.

- **Full-service brokerage firms**, sometimes referred to as broker–dealers, match you with a broker—a financial professional who will provide guidance and support throughout the investing process. **Stockbrokers** are also known as an investment representatives, registered representatives, or account managers. Firms such as **UBS**, **Merrill Lynch Advisors**, **Raymond James**, and **Morgan Stanley** dominate the full-service marketplace.
- A **self-directed brokerage account** allows you to make your own investment decisions. Firms like **Charles Schwab**, **Fidelity**, **TD Ameritrade**, and **E*Trade** provide this option.

Second, you must also decide if your broker–dealer will allow you to purchase securities with borrowed money.

- A **cash account** is the most common and requires you to pay, in advance, for all securities purchased.
- A **margin account** allows you to buy stocks, bonds, and other assets with borrowed money. Most often, margin accounts, because they involve borrowing, are reserved for wealthy clients who have both a high credit rating and a high risk tolerance.

Self-Directed Compared to Full-Service Accounts

As a brokerage-firm client, you must pay for the advice and guidance provided.

- By law, brokers are required to get to know you. This just means that brokers must learn as much about your goals, attitudes, financial situation, and risk tolerance as possible.
- Brokers are required to use this information to help guide their recommendations.
- Because of this, the fees and commissions charged in full-service brokerage accounts will be higher than those charged in self-directed accounts.

If you have a self-directed brokerage account, you are totally responsible for making your own investment decisions. The investment choices you make are yours and yours alone.

Illustration 8.8.2 compares estimated minimum account values, fees, and commissions charged in self-directed and full-service brokerage accounts. Generally, given the lower fees and commissions, self-directed accounts are the better option for individuals just getting started with investing. If you decide later during your lifetime financial journey that you need help managing your assets, a full-service brokerage account might be appropriate.

Opening a Self-Directed Account

You might be thinking, "This all seems too complicated and uncomfortable." This is a common reaction but one that is easily remedied. Let's walk through the process of opening a self-directed account.

HELPFUL HINT

You will *always* want to make sure that you already have some savings set aside for emergencies and other short-term goals.

1. Make sure you have some money saved that can be used for investment purposes (see **Helpful Hint**).
2. Conduct an Internet search for "self-directed brokerage account." Compare the options among several of the companies listed and then select the firm that has a low minimum account balance, low (or no) trading commissions, and low (or no) account fees.
3. Check that the firm offers **Securities Investor Protection Corporation (SIPC)** insurance, which protects your account up to $500,000 per customer, per firm, with up to a $250,000 limit for cash. SIPC covers you in the event that the brokerage firm goes out of business or experiences theft. Keep in mind that SIPC does not insure against losses in the markets.
4. Open the account. You can begin buying and selling securities almost immediately.

ILLUSTRATION 8.8.2 **Self-Directed and Full-Service Brokerage Accounts Compared**

Account Information*	Self-Directed Account	Full-Service Account
Minimum initial deposit	$1,000	$25,000
Minimum initial deposit for individual retirement account (IRA)	$500	$5,000
Minimum initial deposit for 529 savings plan	$100	$1,000
Minimum initial deposit for educational savings account	$250	$1,000
Flat rate online commission per trade	$8.95	$25 plus commissions of 1% up to 5% of the sale
Fee for certificates of deposit	$0.00	$0.00
Annual account maintenance fee	$0.00 unless account value drops below initial minimum investment, then $100	$0.00 unless account value drops below initial minimum investment, then $100

*This is an example. Actual minimum requirements and fee rate schedules vary.

Placing Orders

Types of Orders

When you make your first stock purchase, you will be asked how you want your purchase to be handled. You have three basic choices, as shown in **Illustration 8.8.3**.

1. **Market order**, which instructs the brokerage firm to buy (or sell) at the current ask or bid price. This is the fastest way to transact trades in an account. However, a market order does not guarantee the buy or sell price because sudden market swings can alter the price.
2. **Limit order**, which tells the brokerage firm to only buy (or sell) at a specific price or better. Let's say you want to buy shares in a company only if the price drops below $25 per share. The limit order will stay in effect until the price drops under $25. It is important to use limit orders when you are buying or selling stock that does not have many buyers and sellers, or if you are trading a stock with large daily price swings (see **Helpful Hint**).
3. **Stop order** (sometimes known as a **stop-loss order**), which directs the brokerage firm to buy (or sell) only when the price falls below a set point, say, $24.50. If the stock price jumps down from $25 to $22, then the stock will sell at the next available price ($22) even though the order was set at $24.50. In some situations, a stop-loss order will require the stock price to trade at an exact amount for it to be sold.

HELPFUL HINT

By using limit orders, you are able to protect yourself against sudden price swings in the market price.

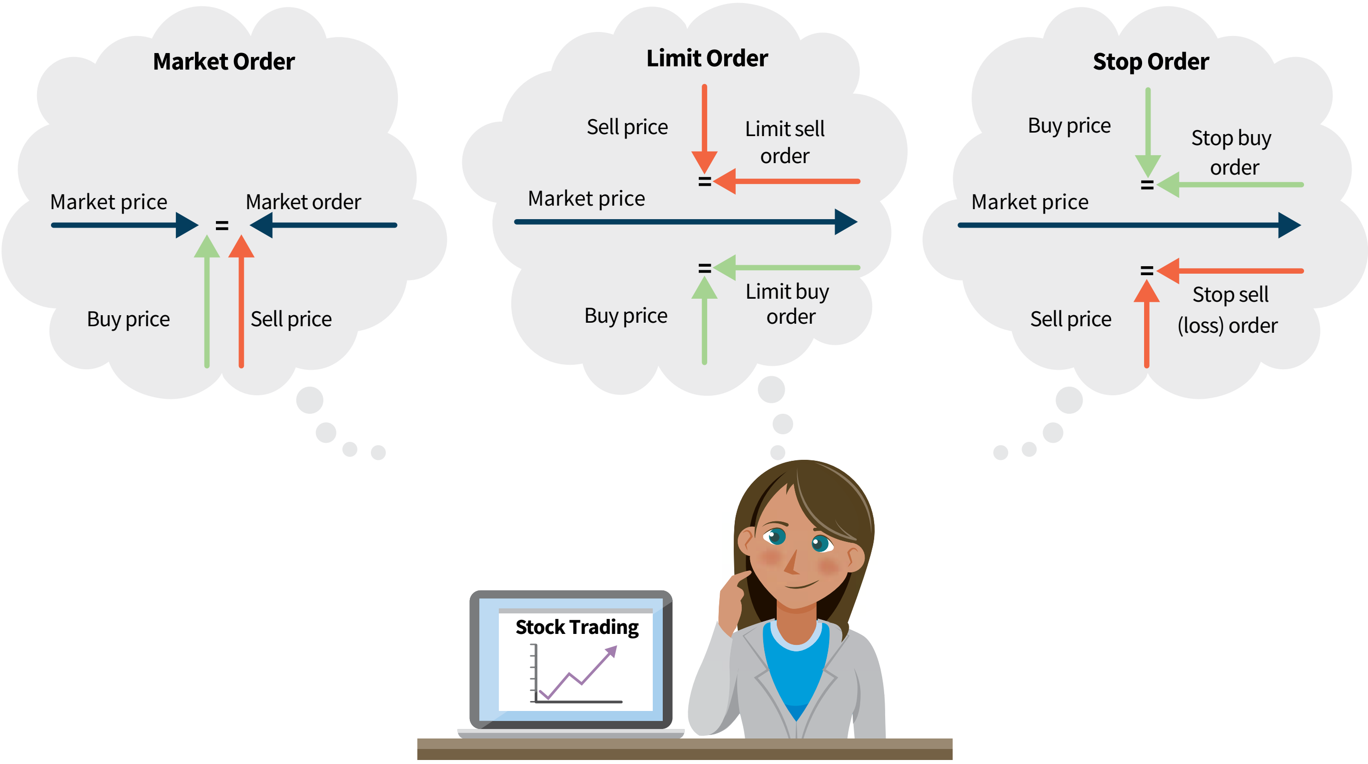
Some investors also use a buy stop or sell stop order. A **buy stop** sets a limit on how much you are willing to pay, whereas a **sell stop** instructs the brokerage firm to sell shares if the price falls.

Online Orders

In today's highly technical world, most brokerage account activity is handled online.

- Years ago, you would have received a **stock certificate**, which is paper proof of ownership, whenever you purchased shares of stock.

ILLUSTRATION 8.8.3 **Market, Limit, and Stop Orders**



- Although you can still receive a certificate, nearly all brokerage firms require that you hold shares of stock in **street name**. This refers to the brokerage firm being shown as the owner of record even though you, as the brokerage account client, actually own the shares.
- Street-name ownership allows for quicker and simpler transactions.

Concepts in Action

Jeff recently opened a self-directed brokerage account and deposited money into his account. He is ready to purchase stock in a company that he has been researching for a while. Because the company is small, the stock price fluctuates quite a bit on a daily basis. With part of his money, Jeff recently purchased the stock using a market order and ended up buying shares at a higher price than he wanted. What do you recommend that Jeff do when purchasing this stock in the future?

Solution

Jeff should use a limit order when purchasing the stock. By using a limit order, Jeff can set the price he is willing to pay for the stock. Jeff's limit order will not execute until the stock ask price is equal to or less than the bid order. In this way, Jeff can protect himself from paying more than he wants per share of stock. However, Jeff may find that the market price of his stock never quite reaches his limit order price, which means that his buy order will never be executed. In this case, Jeff may want to change his limit order or stock-purchasing strategy.

Reading a Brokerage Statement

HELPFUL HINT

Similar to your bank account, it is important to review your brokerage account statement monthly.

Once your account is set up, you will begin to receive account statements, like the one shown in **Illustration 8.8.4** (see **Helpful Hint**). Looking at TJ's account in the illustration, you can see that she withdrew $1,000 from the account, earned $50 in interest, and paid a $30 account fee. TJ's investments also increased by $300 during the month.

ILLUSTRATION 8.8.4 **Sample Brokerage Account Statement**

BROKERAGE ACCOUNT STATEMENT

ABC Brokerage Services
101 Dawson Street
Atlanta, GA 30001

The name and address of the brokerage firm

Account Number: 999-123456789

Statement Period: 05/01/2020 – 5/31/2020

TJ Client	Beginning account value	$9,670.00
850 Waverly Drive	Cash withdrawals	–$1,000.00
Any city, Any state 89891	Dividends/interest	$ 50.00
	Fees	–$ 30.00
	Change in account value	$ 300.00
	ENDING ACCOUNT VALUE	$8,990.00

The name of the client

Opening account balance

Summary of investments held in account

Ending account balance

ASSET ALLOCATION	**Value Last Period**	**Value This Period**	**Change in Value**	**Percent Allocation**
Money market	$4,000.00	$3,020.00	$ 0.00	33.59%
Short-term bond fund	$1,000.00	$1,000.00	$ 0.00	11.12%
S&P 500 index fund	$4,670.00	$4,970.00	$300.00	55.28%

Allocation of investments in account

TRANSACTIONS

Description	*Date*	*Activity/Account*	*Amount*
Interest received	05/05/2020	Money market	$ 50.00
Check issued	05/20/2020	Money market	$1,000.00
Account fee	05/30/2020	Money market	$ 30.00

Summary of account activity

End-of-Topic Assessment

Multiple-Choice Questions

1. Margin accounts are typically used by wealthy clients who have high risk tolerances because these accounts allow investors to:

a. buy and sell securities faster than they can with cash accounts.

b. pay, in advance, for all securities purchased.

c. place buy stop orders or sell stop orders.

d. borrow money from their brokerage firm to buy stocks, bonds, and mutual funds.

2. Which of the following statements is *true* regarding brokerage accounts?

I. Full-service brokerage firms provide guidance to investors.

II. Brokerage accounts are prefunded arrangements between an investor and a broker–dealer.

III. Investors who want to own stocks and bonds do so, almost exclusively, via brokerage accounts.

IV. A self-directed brokerage account is appropriate for an investor who does not want or does not need investment guidance.

a. I, II, and IV only.

b. I, II, and III only.

c. I, II, III, and IV.

d. I and II only.

3. A self-directed cash brokerage account:

a. requires investors to have money in the account before buying investments.

b. requires an investor to use the services of a broker.

c. charges a higher commission in return for more services, such as banking privileges.

d. All of these answer choices are correct.

4. Stockbrokers are often also known as:

a. investment representatives.

b. account managers.

c. registered representatives.

d. All of these answer choices are correct.

5. Which of the following pairs are examples of self-directed discount brokerage firms?

I. Charles Schwab and Merrill Lynch.

II. TD Ameritrade and E*Trade.

III. Raymond James and Morgan Stanley.

IV. Fidelity and Charles Schwab.

a. I, II, and IV only. **c.** I and II only.

b. II and IV only. **d.** III only.

6. SIPC insurance covers:

a. cash in customer accounts up to $250,000.

b. securities in customer accounts up to $500,000.

c. nothing because SIPC is not insurance.

d. both cash in customer accounts up to $250,000 and securities in customer accounts up to $500,000.

7. A market order is:

a. the fastest way to transact a stock market trade.

b. tells the brokerage firm to only buy or sell at a specific price.

c. stays in effect until your specific price is available.

d. instructs a brokerage firm to sell when a set point has been reached.

8. If you, as an investor, wanted to guarantee purchasing a stock at a specific price or better, which type of order would you use?

a. A market order. **c.** A sell limit order.

b. A buy stop order. **d.** A limit order.

9. When purchasing stocks, an investor can:

a. place a market order.

b. place a stop order.

c. use the guidance and support of a registered representative.

d. place a market order, stop order, or use the guidance of a registered representative.

10. How are most shares in stock held today?

a. Physically, in paper form. **c.** In certificate form.

b. In the "cloud." **d.** In street name.

Adventures in Personal Finance

Short Answer

1. Latrice is about to make her first trade in her new brokerage account. She wants to buy 100 shares of STATEU stock at the current ask price of $32.75 per share. What kind of order should she place to make the trade simple and fast?

2. For each of the brokerage firms (broker–dealers) listed, indicate which firms offer full-service or self-directed accounts.

a. Merrill Lynch. **d.** Morgan Stanley.

b. Charles Schwab. **e.** E*Trade.

c. Fidelity.

3. Erika is excited about the prospect of buying stocks. Explain to Erika why it is important to use limit orders when trading stocks that have significant price swings on a daily basis.

Explore

1. The investment marketplace operates 24/7. Investors are able to buy many international stocks not only in their home country but also on a foreign stock exchange. However, not all broker-dealers allow investors to purchase stocks directly on foreign stock exchanges. Compare a full-service and discount brokerage firm of your choosing online or contact the brokerage firm directly to find out if investors can make stock purchases on foreign stock exchanges directly with their brokerage account. Are there additional fees for this activity?

2. Stockbrokers are not necessarily obligated to put their clients' best interest ahead of their own. Stockbrokers are simply required to make recommendations that are suitable based on their clients' personal needs. This creates a conflict of interest wherein a broker might make a recommendation based on a commission he or she will receive, so long as the recommendation is suitable for the client. In contrast, a *fiduciary* is required to put the client's best interest first. What are the pros and cons of working with a fiduciary? What are the pros and cons of working with someone not bound by the fiduciary obligation?

Expanded Learning Activity

Writing Visit the websites of several full-service and self-directed brokerage firms. Search each firm's site for information to re-create Illustration 8.8.2. Briefly write a summary of your findings, focusing on which firm provides the least expensive trading platform. Next, determine which firm charges the highest fees and commissions. Describe why these two firms would differ and to what market segment each firm focuses its market efforts.

Investing in Real Estate

LO 8.9 Explain why some investors prefer to hold and invest their wealth in real estate.

As you traveled to work or school today, you likely saw houses, apartment buildings, stores, and perhaps an office building. Of course, you know that these are places where people live and work. What you might not have seen is the investment value of these places. It turns out that real estate can be a profitable holding spot for some of your investment dollars.

Over the course of your lifetime financial journey, it is likely that you will be involved in the real estate market. You may never own an office building or a storefront, but you probably will own your own home. You may even own a house or an apartment that you rent to others. Not only can this generate income, but this investing strategy can also create long-term wealth if the value of the rental goes up over time. In this topic, we discuss the pros and cons of investing in real estate.

Overview of Real Estate

Types of Real Estate

Real estate refers to land, buildings, and other structures permanently attached to the land. As shown in **Illustration 8.9.1**, investors further classify real estate into two categories:

1. **Residential real estate**, which includes dwellings that are individually owned and where people live (e.g., houses, condominiums, and duplexes).
2. **Commercial real estate**, which is the land and buildings used by businesses and other income-producing activities (e.g., office buildings, hotels, apartment buildings, warehouses, malls, and factories).

ILLUSTRATION 8.9.1

Examples of Residential and Commercial Real Estate

Residential Real Estate	Commercial Real Estate
Personal residences	Office buildings
Condominiums	Apartments
Duplexes	Warehouses
Retirement communities	Hospitals and care centers

Value of Real Estate

Real estate can be extremely valuable. Consider these recent U.S. statistics:

- The value of commercial real estate investments exceeds $8 trillion.
- The value of private residences is more than $25 trillion.
- In total, real estate accounts for more than $33 trillion in wealth, compared to the total market capitalization of all publicly traded U.S. stocks of $20 trillion.

Clearly, investors and non-investors see tremendous opportunities in real estate!

Real Estate as a Use Asset

Ironically, despite the tremendous investment opportunities in the real estate market, most individuals purchase real estate as a use asset rather than an investment.

- **Use assets** are those things that people purchase with the primary intent to use and maintain their current lifestyle (e.g., clothing, furniture, and electronics).
- Similarly, most people purchase real estate because they need or want a place to live.

However, residential real estate can also be considered a dual-purpose asset. We discuss how next.

Buying Real Estate as a Dual-Purpose Asset

Although real estate does serve a practical use as a place to live, real estate can sometimes also be viewed as an investment because real estate has the potential to appreciate in value over time. How does this work in practice? Consider Jason's situation.

- Jason wanted to move out of his parent's home to be closer to school and work, but rent seemed too expensive.
- Jason soon realized that he could buy a three-bedroom condominium, live in one bedroom, and rent the other two bedrooms to his friends.
- The rent that Jason planned to collect would almost be enough to pay his mortgage payment, property taxes, insurance, and condominium association dues each month.

Jason knew that he would end up paying the difference between the rent he collected and what he had to pay each month, but that was a small amount compared to the rent that he would have to pay elsewhere.

- Jason borrowed the money to buy the condominium. He was responsible for paying the mortgage, property taxes, property insurance, and the condominium association dues. Jason not only found an inexpensive place to live, but he also ended up owning a property.
- Although Jason was taxed on the rental income, he also received tax benefits from owning the property. He was able to deduct the mortgage interest, property taxes, rental-related fees, and depreciation on the condo as deductions on his personal tax return, saving him thousands of dollars annually in taxes.
- If housing prices increase, Jason can potentially increase his **equity**, which is calculated by subtracting what is owed on a home from the fair market value:

Equity = Fair Market Value of Home − Mortgage and Other Housing Debt

As you can see, Jason's purchase of a house provided three benefits, as depicted in **Illustration 8.9.2**:

1. A place to live.
2. A mortgage payment offset by income from renters.
3. An investment that he can possibly sell later for a profit.

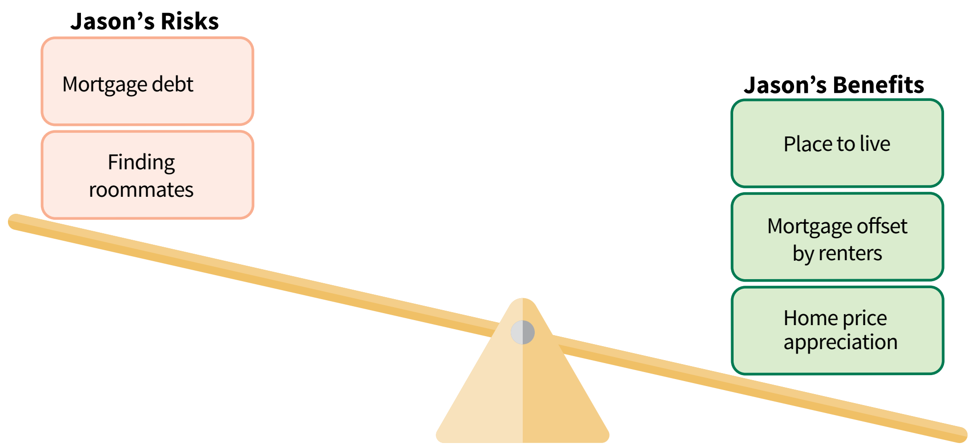


ILLUSTRATION 8.9.2
Real Estate as a Personal Use and Investment Asset

Concepts in Action

Jim works full-time and earns $45,000 per year. He is single and doesn't mind having roommates. Jim is considering buying a three-bedroom condo in which he can live and rent out. Currently, Jim pays $900 for rent each month. If Jim purchased the condo, his mortgage payment would be $1,500 per month (including taxes and property insurance). Jim will also have to pay the condominium association dues of $400 per month. Jim is confident he can find two roommates, each paying $500 per month. Is this a good deal for Jim?

Solution

On the surface, Jim will have the same net cash flow owning versus renting. As an owner, he will pay $1,900 ($1,500 + $400) and receive $1,000 ($500 + $500) each month, resulting in a $900 cash outflow. (Jim will have to report the rental income on his tax return.) However, as a property owner, Jim will receive some additional tax benefits. Jim may be able to deduct all the interest on his mortgage and the property taxes on his tax return. Jim will also be able to deduct two-thirds of the condominium association dues on his tax return, as well as several other expenses associated with his rental property (remember that two-thirds of his home is used as a rental property). Jim will also be able to depreciate his property and receive an additional tax benefit. The tax savings from ownership equates to $400 per month, making Jim's after-tax cost of ownership closer to approximately $500 per month. This is much less than what Jim is currently paying for rent.

Additionally, as an owner, Jim benefits from any price appreciation, which can be substantial over time. However, if real estate prices fall or Jim is not able to find roommates, Jim could end up financially worse off. Jim will also have to pay for repairs and maintenance. This is a risk that Jim needs to decide whether he is willing to take.

Real Estate Investment Trusts

What if you want to invest in real estate but are not comfortable becoming a landlord and assuming the responsibility to pay the mortgage each month as well as maintain the property? What options do you have? More importantly, how does an investor purchase a diversified portfolio of real estate? After all, in the example, Jason's wealth is tied up in one property. It would make more sense if he owned multiple properties in different locations, thereby diversifying his holdings as a way to reduce his risk. One way to do this is to purchase a real estate investment trust.

Advantages of REITs

Real estate investment trusts (REITs) provide a way to add real estate to your investment portfolio at a relatively low cost.

- REITs are similar to mutual funds in that investors pool their money to hire professional managers to obtain sufficient investment capital to purchase multiple properties (sometimes REITs purchase mortgages secured by real estate).

- REITs borrow additional money from banks to maximize the number of properties that can be purchased.
- REITs provide a solution to the real estate investment dilemma by allowing investors with limited capital the opportunity to own part of a diversified portfolio of commercial real estate without having to take on debt or become a landlord.
- REITs pay dividends to unit holders (similar to shareholders).

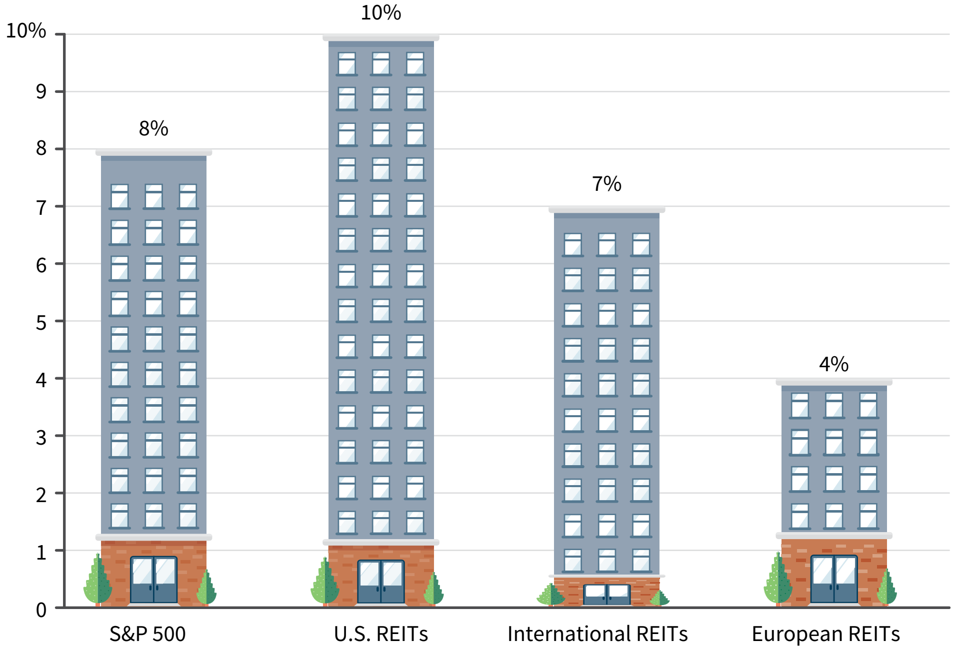
HELPFUL HINT

Owning REITs in your investment portfolio can add valuable diversification and potentially high returns.

As with other investments, those who invest in REITs hope that there may also be price appreciation in the value of the REIT. As shown in **Illustration 8.9.3**, the recent long-term, 5-year average return of REITs is fairly competitive with other investments (see **Helpful Hint**). As with any investment, however, there are risks. As was seen during the economic recession of 2007–2009, real estate prices fell, causing significant decreases in the value of REITs.

ILLUSTRATION 8.9.3

Approximate Annual Returns of REITs Compared to the S&P 500 Since 1994



Source: MSCI and S&P 500 indices.

Purchasing REITs

You have two main options when it comes to purchasing REITs.

1. You can purchase REITs that specialize in different areas of commercial real estate, including warehouses, apartments, retail stores, hospitals, and regional malls.
2. You can purchase a REIT index. A **REIT index** invests in the entire market of commercial real estate—usually using other REITs and mutual funds—so that investors can further diversify their holdings and decrease their risks.

To buy a REIT, you usually need a brokerage account. However, you can also sometimes purchase a REIT directly through a mutual fund company or your employer.

Real Estate Risks

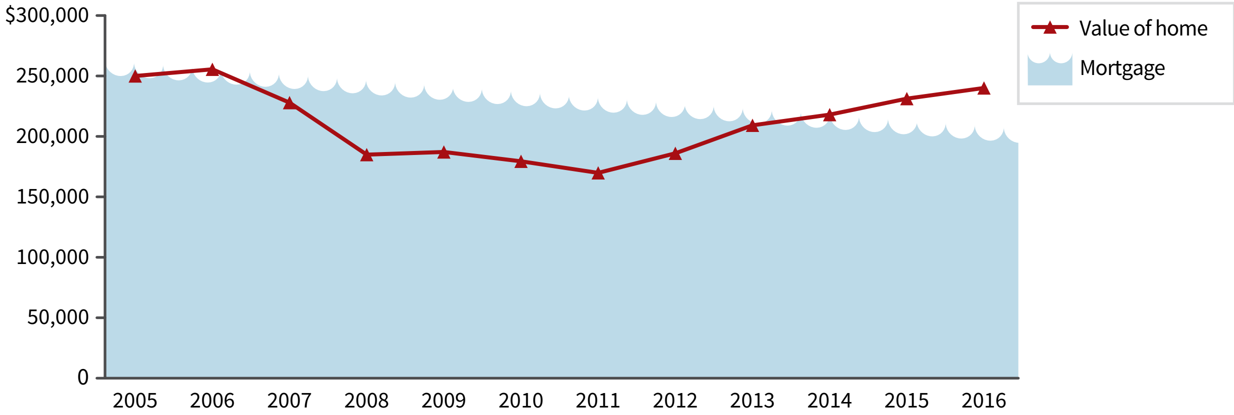
Most people do not think very much about the investment aspect of real estate when they are purchasing a home in which to live. Yet, when it comes time to sell, some are left in a financial bind when they realize that their home has depreciated in value.

Underwater Mortgage

During the global financial crisis that started in 2008, real estate values decreased dramatically. The individuals who had extra cash during this time were able to make great investments. They

were able to buy houses at very low prices and then sell them a few months or years later at much higher prices. However, as shown in **Illustration 8.9.4** (the graph assumes that a home was purchased with 0% down and a 30-year mortgage), typical borrowers during this time period owed more on their mortgage than their homes were worth, commonly referred to as being **underwater**.

ILLUSTRATION 8.9.4 **Real Estate Price Fluctuation and Mortgage Debt**



Source: Federal Reserve Bank of St. Louis.

- Generally, being underwater is a short-term problem. If homeowners continue living in their homes for an extended period of time, their house values will generally increase again over time as they will continue to pay down the balance of their mortgage.
- However, homeowners who lost their jobs during this time were trapped. They could not afford to move to higher-paying jobs because they could not afford to sell their homes (see **Helpful Hint**).
- If a home is worth less than the mortgage, the seller must pay the difference between what is owed and what the home sells for. During the global financial crisis, this difference ranged from a few thousand dollars to several hundred thousand dollars for millions of homeowners.

HELPFUL HINT

Recall that moving to higher-paying jobs where an individual's skills and knowledge (human capital) is valued is an important part of enhancing financial well-being.

Since few people had that much money available—too few Americans even had an emergency savings fund—they ended up turning down better job opportunities elsewhere. Worse still, because so many homeowners could not sell their homes, they were forced to turn the keys over to the mortgage lender or go through foreclosure, a short sale, or a similar process.

Foreclosures and Short Sales

When individuals go through **foreclosure**:

- They lose their home to the lender (often a bank) and any equity in the home.
- They continue to pay the difference between what was owed and the eventual selling price the bank is able to receive for the property.

During a **short sale**:

- The lender takes back the home and forgives any amount owed.
- The amount forgiven is usually considered taxable income.

In either case, a homeowner's credit score will be hurt for at least 10 years if a foreclosure or short sale occurs. Recall that a **credit score** summarizes your credit history as collected in your credit report. Credit scores help lenders predict if you will repay a loan and make payments on time. Lenders may use credit scores when deciding whether to grant you credit, what terms you are offered, and what interest rate you will pay on a loan. During and after the global financial crisis, many people found that they could no longer obtain credit easily or inexpensively.

Using Real Estate as a Rental

Rather than go through a foreclosure or short sale, many homeowners decided to rent out their houses and move for new employment. The advantages associated with this strategy include:

- Retaining home ownership.
- Generating income to pay the mortgage.
- Preserving a credit score while owning the property until the value of the house eventually increases.

Although never intending to become a landlord, tens of thousands of homeowners ended up choosing this route as a way to cope with the consequences of the global financial crisis.

End-of-Topic Assessment

Multiple-Choice Questions

1. Which of the following is an example of commercial real estate?
   I. Warehouse.
   II. Shopping mall.
   III. Apartment building.
   - **a.** III only.
   - **b.** I and II only.
   - **c.** II and III only.
   - **d.** I, II, and III.
2. Which of the following assets is the largest in terms of market value?
   - **a.** U.S. commercial real estate.
   - **b.** U.S. residential real estate.
   - **c.** The market value of all publicly traded U.S. stocks.
   - **d.** The market for U.S. rental properties.
3. Which of the following is *not* an example of a use asset?
   - **a.** Furniture.
   - **b.** Clothing.
   - **c.** Mutual fund.
   - **d.** Electronics.
4. **Calculate** Jamal is thinking about buying a duplex. His monthly expenses will be $900 for the mortgage, $500 for taxes, and $300 for insurance. He also needs to pay a yearly association fee of $900. If he can rent out one-half of the unit for $1,500 per month, how much will he make or lose per month?
   - **a.** −$200.
   - **b.** −$275.
   - **c.** −$1,100.
   - **d.** +$350.
5. Shamila is interested in adding real estate to her portfolio. She has looked into many real estate alternatives and is open to any reasonable recommendation. If Shamila has a limited amount of money to invest initially and few household repair skills, what type of real estate investment should she select?
   - **a.** Commercial real estate.
   - **b.** Dual-purpose real estate.
   - **c.** A multifamily apartment complex.
   - **d.** A real estate investment trust.
6. How could you go about purchasing shares in a REIT?
   I. Go directly to a mutual fund company that offers REITs.
   II. Open a brokerage account and buy shares through the account.
   III. Through an FDIC-regulated bank.
   - **a.** II only.
   - **b.** I and II only.
   - **c.** II and III only.
   - **d.** I and III only.
7. **Calculate** When Mabel purchased her home for $300,000, she put down a deposit of 10%. Besides her original purchase, she has paid $25,000 in principal. Her house is currently worth $315,000. How much equity does Mabel have in her house today?
   - **a.** $245,000.
   - **b.** $70,000.
   - **c.** $55,000.
   - **d.** $65,000.
8. When homeowners owe more on their property than what the property will sell for, they are:
   - **a.** in foreclosure.
   - **b.** involved in a short sale.
   - **c.** in default.
   - **d.** underwater.

9. All of the following are disadvantages associated with foreclosure, *except*:

- **a.** the foreclosure stays on your credit report for at least 10 years.
- **b.** you may still owe money to the mortgage lender.
- **c.** the mortgage lender allows the remaining mortgage balance to be eliminated.
- **d.** it may be difficult to obtain credit after the foreclosure.

10. All of the following are reasons to be a landlord, *except*:

- **a.** landlords are eligible for certain tax breaks.
- **b.** landlords are responsible for the maintenance and upkeep of the property.
- **c.** landlords can build equity in property over time.
- **d.** landlords are responsible for the maintenance and upkeep of the property and can build equity in property over time.

Adventures in Personal Finance

Short Answer

1. Describe the advantages associated with owning real estate as a dual-purpose asset.

2. What is the primary difference between commercial and residential real estate?

3. **Calculate** Cherokee is thinking about purchasing a two-bedroom condominium as a rental property investment. She believes she can easily find a family to rent the property and pay $1,200 per month in rent. Her monthly expenses include (1) a mortgage with a payment of $750, (2) condo fees of $100, (3) taxes of $150, (4) insurance of $75, and (5) miscellaneous maintenance of $50. How much profit will Cherokee make by being a landlord? Assuming that she purchases the property for $100,000, what is her annual rate of return from the rental profit or loss?

4. Many landlords are willing to accept a small return in the form of rent or even accept a monthly loss to own real estate. If landlords simply use the rent to cover expenses, how do real estate investors make money over the long run?

Explore

1. **Writing** There are several REIT indices that you can purchase as mutual funds or ETFs. Search online for U.S. REIT index mutual funds or ETFs, as well as international REIT index mutual funds or ETFs. Select at least three REITs from your search and write a brief report summarizing which REIT index you would choose and its advantages over the other two options.

2. **Writing** **Presentation** Becoming a landlord can consist of extra work, unexpected expenses, and unpleasant experiences (such as evicting tenants), but it potentially has significant financial rewards. You likely know a landlord. Perhaps it is a family member or relative, or perhaps it is the person that you pay rent to each month. Find a landlord that owns between one and three housing units and ask the following questions: What motivated him or her to become a landlord? What are the best and worst things about being a landlord? If he or she could change one or a few past decisions, how would he or she have handled things differently when working with renters? Write a two-page summary of your interview and share it with your class.

Expanded Learning Activity

Writing **Presentation** **Calculate** Many residential real estate rental investors start by purchasing duplexes and living in one-half while renting out the other half. This is a great strategy for those with limited money for down payments and those who do not yet have the cash flow to fully fund a mortgage. Conduct research in your city or town on duplexes. Use findings from your research to answer the following questions.

- **a.** How much, on average, do duplexes cost to buy?
- **b.** How much do current landlords charge for rent?
- **c.** What would the 30-year mortgage payment be if you purchased a duplex (assuming that you qualify for the best possible mortgage)?
- **d.** What percentage of your mortgage payment would be covered by renting out the other half of the duplex?
- **e.** What additional expenses would you also have if you were to purchase a duplex and rent it out? Would you ever consider this type of investment?

Write the answers to these questions in a brief report. Be sure to share the results of your research with others in class.

Investing Alternatives: Collectibles, Auctions, and Other Techniques

LO 8.10 Identify how supply and demand, spreads, and level of specialization affect the value of alternative investments.

You have probably watched or heard about reality TV shows, such as *Storage Wars*, *American Pickers*, *Pawn Stars*, or *Antiques Roadshow*, which feature windfall profits resulting from an item that was purchased at a garage sale, found in an old barn, or bought as part of a storage unit auction. Wouldn't it be great to buy a vase for $5 at a local garage sale that turned out to be a rare Ming vase from China worth close to $1 million? That would be quite a return on your $5 investment!

Our imaginations can take us on fun adventures and sometimes lead us to think, "That sure seems like an easy way to make some money." What you are about to learn in this topic is that, although dabbling with collectibles and auctions can be fun, turning these activities into successful investments may be more challenging than you realize.

Overview of Collectibles

The World of Collectibles

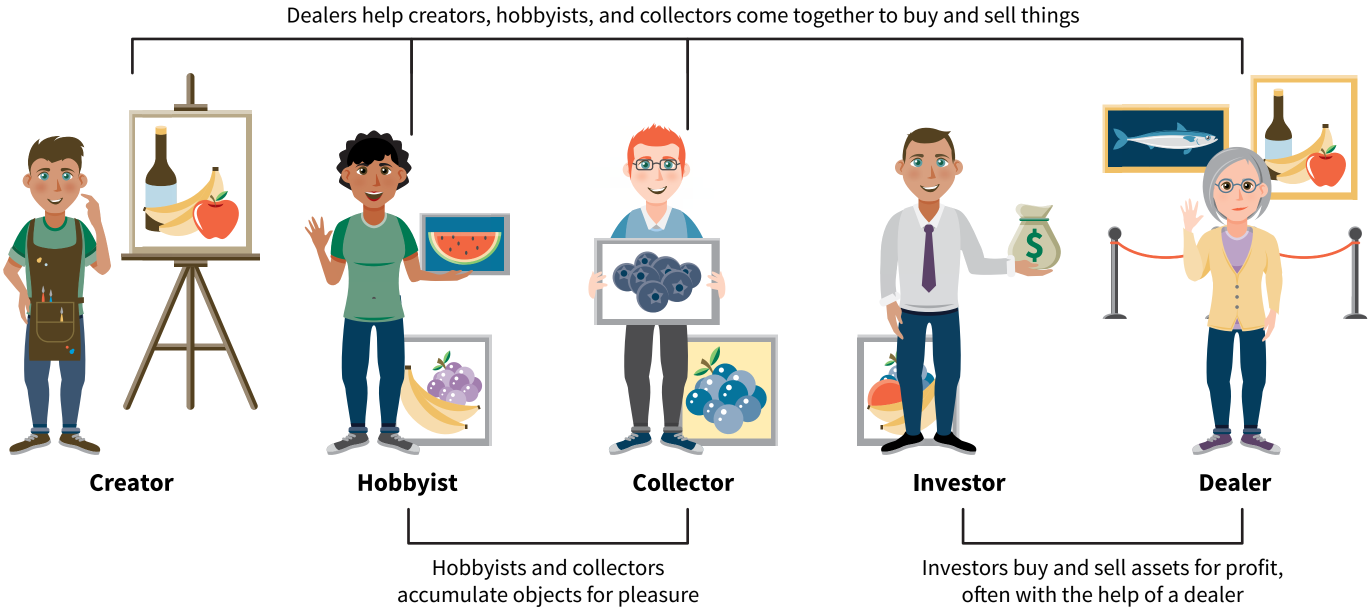
Typical investments tend to be stocks, bonds, mutual funds, exchange-traded funds, and real estate. But there is an entirely different and much older world of investing that involves collectibles, auctions, and pawnshops.

- **Collectibles**: assets that include jewelry, art, stamps, coins, collectible cards, teddy bears, vintage games, antiques, and other "hard assets."
- **Auctions**: a public sale in which goods (sometimes with limited or no inspection) are sold to the highest bidder.
- **Pawnshops**: a place where individuals can buy and sell collectibles and other personal property for cash; pawnshops help create a market for some collectibles.

The phrase **tangible investing** describes the world of collectibles and other **hard assets** (something you can hold, buy, and sell, such as gold, silver, platinum, or minerals, and real estate). As **Illustration 8.10.1** shows, there are five types of participants within the sphere of tangible investing.

1. The **creator** or developer of an asset, such as an artist who paints a picture or a miner who brings gold to market. These individuals are involved in transforming their human capital to wealth.
2. The **hobbyist**, who is involved with buying and selling items in which she or he is interested, without consideration of future profit. For example, you might have collected baseball cards, certain stuffed animals, or coins in the past, mainly for the fun of doing it.
3. The **collector**, who specializes in accumulating items within one category. For example, you may know someone who collects certain types of antique guns or automobiles. Collectors know a great deal about each item they own, and they are always looking for specific items to add to their possessions. Generally, these individuals are passionate about their collections.

ILLUSTRATION 8.10.1 The People That Shape the Value of Tangible Investments



4. A tangible **investor**, who purchases hard assets primarily with the intent to generate capital gains. For example, this person might purchase an expensive piece of art only to hold it in storage until the art has appreciated in value and then profit from the sale of the work.
5. The **dealer**, who creates markets for tangible assets, such as an art dealer or coin dealer. Often, many markets are created through online forums that bring specialized buyers and sellers of specific collectibles together. In these situations, the market-maker collects a fee on each transaction but does not necessarily maintain an inventory of items.

If you hope to make money as an *investor* purchasing collectibles, you must therefore understand the important role of dealers.

Collectible Dealers

Dealers are business owners who stand ready to buy or sell an asset by creating a market for buyers and sellers. The concept of bid and ask prices is relevant to understanding how dealers work. The example that follows focuses on local markets, but online markets function in the same way.

Bid and Ask Prices

Imagine that you have, over the years, collected quite a few vintage video games. Now that you need money for a down payment on a car, you would like to sell the games. You have two options.

1. Find another collector and sell what you have to that person (see **Helpful Hint**).
2. Find a dealer who specializes in vintage video games. **Illustration 8.10.2** shows how a dealer makes a market for collectibles and other tangible assets.

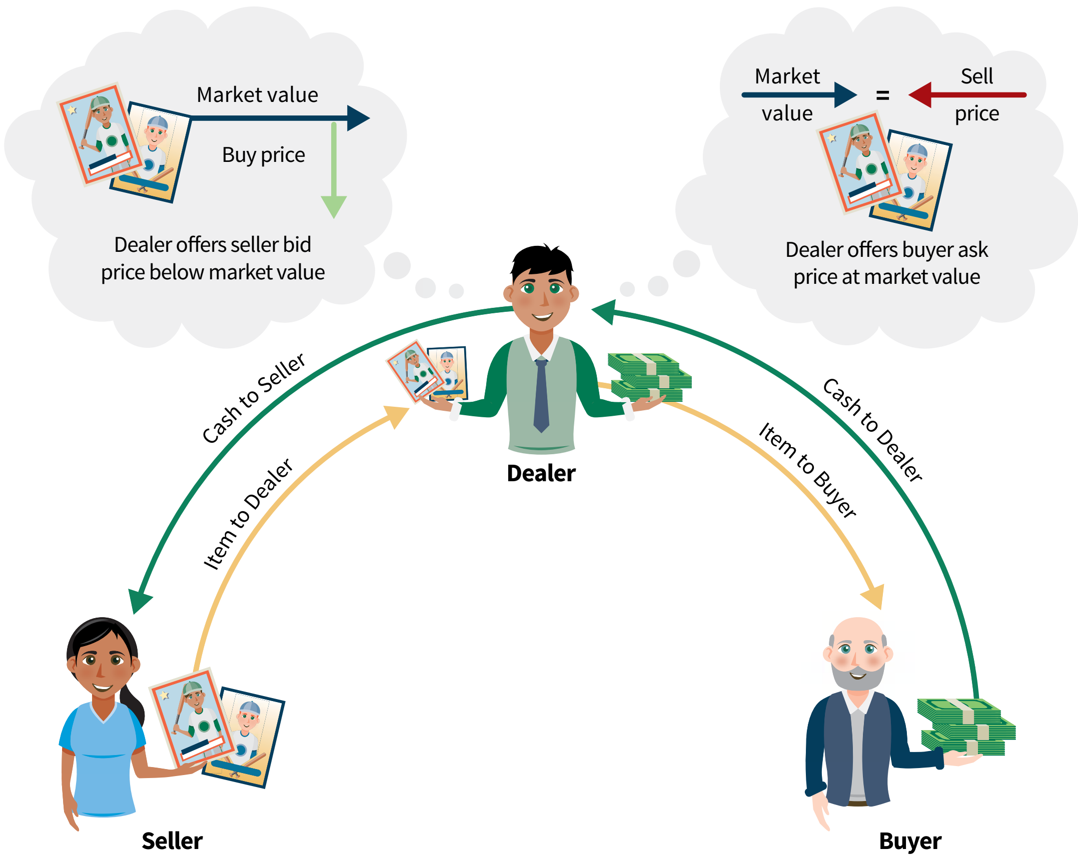
HELPFUL HINT

The Internet helps make collector-to-collector transactions easier, but the reality is that it does take time to sell this way.

The process of selling to a dealer is relatively easy:

- The dealer will know the current market value of your items and offer you a price accordingly. This is known as the **bid price**.

ILLUSTRATION 8.10.2 Transactions with a Dealer



- The dealer will offer you a bid price below market value. This is how a dealer makes money. Dealers buy low and then turn around and sell your items to others for a profit.
- For example, if you have a game that a dealer thinks she can sell for $50, she will likely offer you $20 (cash). If you know the real value, you can negotiate to raise the bid price, say, to $25.
- If you accept the bid price, the dealer now owns the video game, which she can sell to a customer. She will most likely set the **ask price** at the market value ($50) but may lower that price during negotiations. In this case, the dealer will probably sell the game to a customer for $45, thereby making $20 ($45 ask price – $25 bid price) on the transaction.

The difference between what the dealer bought the game for ($25 bid price) and what she sold it for ($45 negotiated ask price) is called the **spread**. The spread is shown in **Illustration 8.10.3**.

The Challenges of Being a Dealer

Two factors determine a dealer's success.

1. The size of the spread. In the previous example, the spread was $20.
2. How quickly the dealer can "flip" the item. In this scenario, the dealer bought and sold the item within a few weeks (i.e., made a flip) to earn the $20.

Sounds easy, right? Actually, there are a number of challenges that dealers must overcome to profit from their investments in collectibles.

- Local and sometimes national markets for collectibles tend to be small and dominated by a few dealers.
- Buying is easier than selling collectibles.

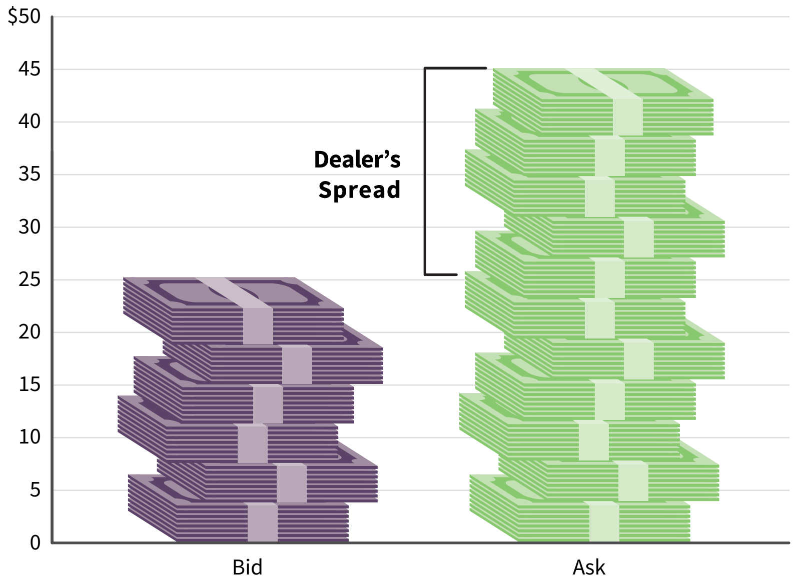


ILLUSTRATION 8.10.3

Dealer's Spread on Pricing

- The only way dealers can make money is to consistently buy things at low prices and then resell those items at higher prices, almost never at true market value.
- Dealers have many costs, such as store rent and utilities, as well as advertising and sales expense.
- Dealers may use online auction sites (such as **eBay**) or auction houses (such as **Sotheby's**) to advertise their products. However, these auction sites and houses charge dealers either a flat fee or a commission (often 15–35% of the final sales price). These costs eat up a big portion of any profit made, thereby cutting a dealer's spread.

Investing in collectibles requires a high risk tolerance and significant time commitment. Going to yard sales every weekend, buying items, and then reselling them may seem like an easy way to make money, but this is only true if you have a willing buyer who can pay you more than what you spent. Further, it is unlikely that selling to dealers will provide you with consistent profits.

Market Equilibrium

Supply and Demand

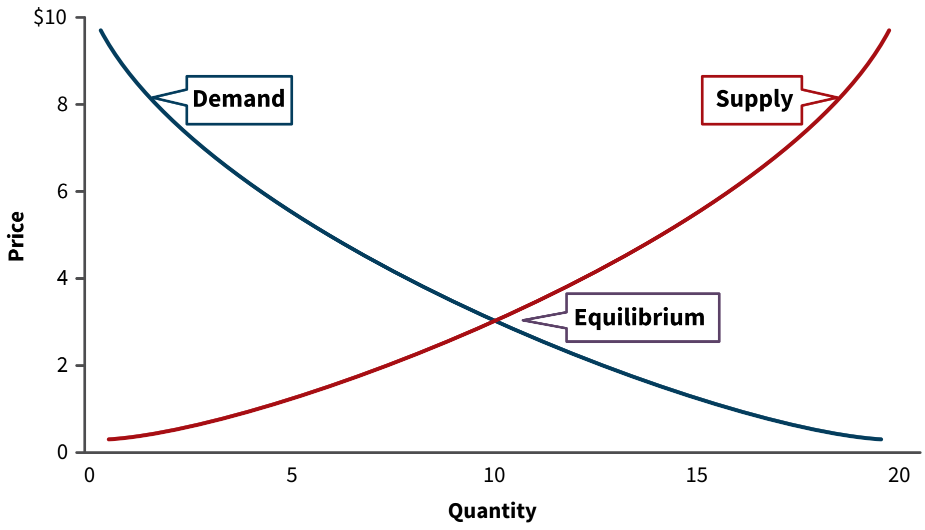
At some point during your academic career, you probably have seen a **supply and demand graph**, like the one shown in **Illustration 8.10.4**, which illustrates the fundamental building blocks of modern economics.

- In almost all cases, as the price of a product falls, the demand for the product increases, and vice versa.
- *Equilibrium* is the point at which the two lines meet. This is where demand "equals" the supply of an asset. In this example, the equilibrium price is $3.

When it comes to tangible investing, demand is much more important than supply. Recall the dealer who purchased your vintage video games. She will almost always be willing to pay more for a game that she knows can sell quickly (i.e., there is high demand). This is true even if there are thousands of these games available (i.e., high supply). If the demand is high enough, then she will be willing to pay you more because she knows she can flip the asset quickly. This rule is evident in pawnshops where collectibles, such as gold and silver, have small spreads between the bid and ask price because these assets have strong local and worldwide demand. However,

ILLUSTRATION 8.10.4

Supply and Demand Curves



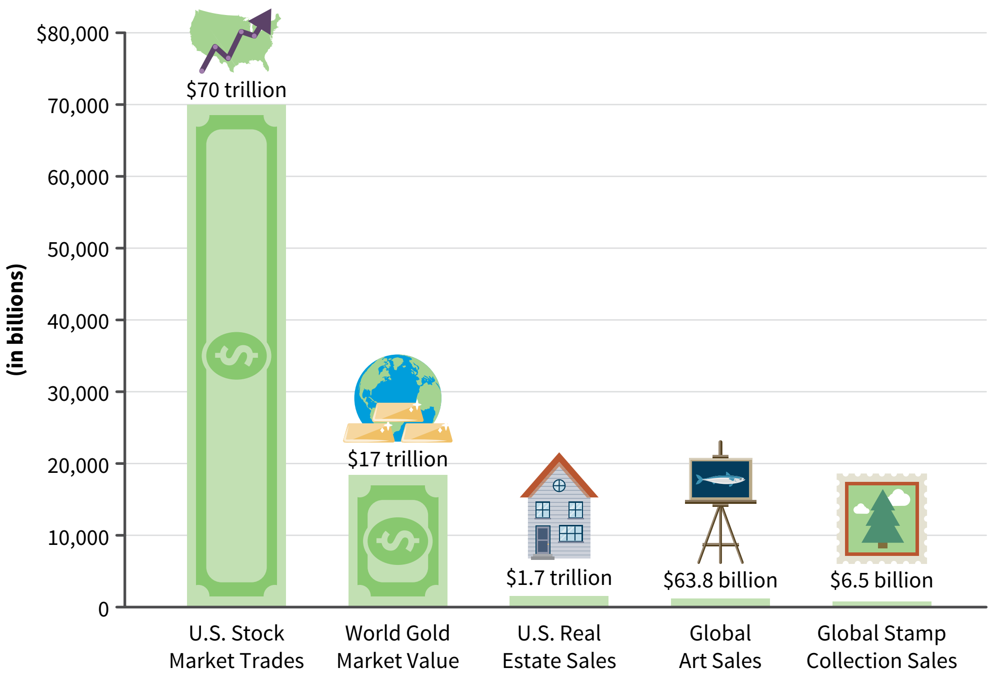
with other niche collectibles, like baseball cards, the spread may be small, not because the card is not valuable, but because the market is so small.

Demand and the Market for Collectibles

The size of markets can indicate the overall demand for the investment assets you are buying or selling. **Illustration 8.10.5** shows the approximate size of selected markets based on the total volume of sales happening within that market. Relative to other investment markets, the number of buyers tends to be limited for collectibles.

ILLUSTRATION 8.10.5

Approximate Amount of Transactions Conducted in Selected Markets



Source: Federal Reserve Bank of St. Louis; art and collectible values based on author estimates.

This is a bit sobering, especially if you are dealing in a market that is smaller than those shown in the illustration. For example, let's say you are a dealer and want to sell a $50 vintage video game. Here's what may happen.

- If you end up paying 20% in commissions ($10) to sell the game, you are left with $40.

- Now say that you've spent four hours making this deal happen (researching, buying, and selling).
- To make it worth your time, you cannot pay more than $10 for the game. Even then, you are not making minimum wage (as your 4 hours of work would be worth $30 ÷ 4 hours = $7.50 per hour)!

As you can see, it is actually quite difficult to make a good return on your investment in tangible assets. This may not matter if you are buying collectibles for fun. You may end up making money, but just don't count on it. Instead, collect for the adventure!

Concepts in Action

Tom owns a small landscaping business. Underneath the pavement of several city streets near where Tom lives are old cobblestone streets. When the city water crew digs up one of these streets to make repairs to underground utilities, they generally discard the cobblestones and fill the holes back up with an engineered fill material.

Tom has worked out an arrangement with the city so that he can collect these cobblestones before the repair is completed and the work site is cleaned up. Tom then sells the reclaimed cobblestones ($20 for each piece) to his landscape customers, who then use them for patios, driveways, or garden edges. Tom stores the cobblestones in his yard. Is Tom a developer, hobbyist, collector, investor, or dealer? Is this a smart investment for Tom?

Solution

Tom is not creating a market for reclaimed cobblestone, so he is not a dealer. He is gathering the cobblestone, not because he wants it for himself but rather because he intends to make a future profit from it. In this case, Tom is an investor.

Is this "investment" worth his time and effort? Tom understands the landscaping business and knows how the products are used and sold. If Tom spends 2 hours of his time gathering 15 reclaimed cobblestones, each worth $20, then he effectively has the potential to earn $150 per hour of work [(15 × $20) ÷ 2 hours)]. In addition, Tom does not need to spend any time trying to sell the cobblestones because his customers are already established.

Tom invested in what he knew, in this case, cobblestones. Although the overall size of the reclaimed cobblestone market is small, Tom is in a position to get the product for virtually free and then sell it at a much higher price because of his familiarity with the business. So, he is overall getting a good return on his investment.

End-of-Topic Assessment

Multiple-Choice Questions

1. Tangible investments include:
   - **a.** collectibles and hard assets.
   - **b.** stocks in large companies.
   - **c.** government bonds.
   - **d.** options on real estate.

2. A tangible investment is something you can:
   - **a.** sell.
   - **b.** hold.
   - **c.** buy.
   - **d.** hold, buy, and sell.

3. Which of the following is *not* a hard asset investment?
   - **a.** Real estate.
   - **b.** Silver.
   - **c.** Gold.
   - **d.** REITs.

4. Which of the following could be a collectible and potentially worth more than its original cost?
   - **a.** An automobile.
   - **b.** A baseball card.
   - **c.** Both an automobile and baseball card.
   - **d.** Neither an automobile nor baseball card.

5. Which of the following are among the five main participants within the sphere of tangible investing?
   - **I.** Hobbyists.
   - **II.** Creators.
   - **III.** Collectors.
   - **IV.** Dealers.
     - **a.** I, II, and IV only.
     - **b.** I, II, and III only.
     - **c.** I, II, III, and IV.
     - **d.** I and II only.

6. How do dealers make money?
   - **a.** Buy items at their true value and find buyers willing to pay more.
   - **b.** Make markets for tangible goods.
   - **c.** Buy many items hoping that some become valuable enough to sell at good prices.
   - **d.** Consistently buy items at low prices and resell them at higher prices.

7. When it comes to investing, you can be a(n):
   - **I.** developer.
   - **II.** owner.
   - **III.** lender.
   - **IV.** dealer.
     - **a.** I, II, and IV only.
     - **b.** II and III only.
     - **c.** I, II, III, and IV.
     - **d.** I and II only.

8. Auction sites like **Ebay** or **Ubid** make it easy to buy and sell tangible assets. But they also:
   - **a.** guarantee items will be sold.
   - **b.** help create demand for tangible assets.
   - **c.** make it easier to make money in tangible assets.
   - **d.** impose costs that reduce the spread that can be made buying and selling tangible assets.

9. Equilibrium:
   - **a.** helps determine how much it should cost to sell a tangible asset.
   - **b.** shows that demand for an item is more important than the supply.
   - **c.** is where demand of an asset equals the supply for an asset.
   - **d.** denotes excess supply in the market.

10. Which of the following tangible asset markets is largest (based on annual sales)?
    - **a.** Gold market.
    - **b.** U.S. commercial real estate.
    - **c.** Worldwide art sales.
    - **d.** Worldwide stamp collection sales.

Adventures in Personal Finance

Short Answer

1. Match the following terms with the appropriate definition.

a. Dealer.	**1.** Someone who converts their human capital into wealth.
b. Hobbyist.	**2.** A person who buys something today with the anticipation of selling the asset in the future for a profit.
c. Collector.	**3.** Someone who accumulates assets purely for pleasure.
d. Investor.	**4.** A person with an advanced hobby who has specialized knowledge.
e. Creator/developer.	**5.** Someone who creates a market for an asset by being willing to buy or sell the asset at a bid or ask price.

2. **Calculate** Marc is an avid baseball card collector. When his friends were working at fast-food restaurants, he was buying and selling cards at local and statewide conventions as a way to make money. Last year, he decided to sell his collection to raise money for graduate school. When he approached his local dealer, he was offered $8,500 for the collection. Was this the dealer's bid or ask price?

3. A company recently advertised that a rare postage stamp increased in value from $5,000 in 1998 to more than $10,000 in 2014. The advertisement concluded that you should be a stamp investor. On paper, this is a 100% gain in value. Why is this advertised gain somewhat misleading?

Explore

1. **Calculate** Kristy is a bargain hunter. Over the summer, she visited almost every yard and garage sale in town. She spent $2,000 on items. Her investment plan was to buy things cheaply and then at the end of summer sell the items at a local auction house. The auction company charges a 20% commission on the gross sale of items. Last week at the auction, she sold everything for a total of $3,000. Based on this information, help Kristy answer the following questions.

   a. How much did she pay in auction commissions?

   b. What was the amount of Kristy's profit or loss?

   c. Given her original investment, what was her percentage rate of return?

   d. Assume that she spent 50 hours over the summer buying, cleaning, and then selling her items. How much did she make per hour?

   e. In your opinion, how did she do as a tangible investor?

2. **Writing** Not all capital gains are taxed at the same rates. Recall that long-term capital gains resulting from the sale of capital assets qualify for a lower tax rate, potentially a 0% tax rate if the taxpayer's marginal tax rate on ordinary income is 10% or 12%. However, Congress has assigned a higher tax rate on capital gains resulting from the sale of collectibles. Visit the IRS website and research what the IRS defines as collectibles and identify when this higher tax rate would apply. Do you have any collectibles that would be subject to this higher tax? Write a summary of what you find out.

Expanded Learning Activity

Locate someone (or yourself) who has a collection. What is it? What is the collection worth if you sell it to another individual? What would your collection be worth if you sold it to a dealer?

Protecting Your Investments

LO 8.11 List ways to protect your investments from losses and frauds.

Risk and return go hand in hand. This means that you must be willing to take more risk to capture a larger gain. This fundamental aspect of life goes far beyond the domain of investing. Consider the explosive growth in adventure vacations. People, including families, are increasingly paying large sums of money to push their bodies and minds to physical and mental limits. Why would someone be willing to pay money for this type of experience? It turns out that for some, the gain associated with exploring risky on-the-edge destinations is one way to get more out of life.

There is a similarity between taking adventure vacations and your lifetime financial journey. At some point, you will probably want to get more out of your saving and investing activities. This means that you will need to take more risk with your money. At the same time, you want to have some protection in place as well to avoid *needless risks*, such as frauds and rip-offs. Think of it this way: if you are on an adventure vacation, you want to be sure that your guide has your best interests in mind. You certainly would not want your guide to leave you stranded or steal your supplies that can guarantee your survival. The same is true when it comes to your money. In this topic, we discuss the steps you need to take, starting today, to ensure that your investments are as secure and protected as possible.

Protecting Yourself as an Investor

Illustration 8.11.1 summarizes some of the most important savings and investment products that you are likely to use during your lifetime financial journey. Note especially the level of risks and returns associated with each asset (with four stars being the highest risk).

ILLUSTRATION 8.11.1 Savings and Investment Products

	Bank Products	EE/I Bonds	Stocks	Bonds	Mutual Funds	ETFs	Hard Assets Including Real Estate
Key concept	Low risks mean low returns.	Guaranteed returns are state income tax-free.	Stocks are a great long-term investment.	Bonds are appropriate for those who need current income.	Funds provide diversification and professional management.	ETFs blend the best of stocks and index mutual funds.	Hard assets can be good diversification tools.
Risk	*	*	*** to ****	* to ****	* to ****	** to ****	*** to ****
Return	*	**	* to ****	* to ****	* to ****	* to ****	* to ****
Where to buy	Directly from a bank or credit union.	Directly at a bank, credit union, or through the Internet.	Usually in a brokerage account but sometimes in a dividend reinvestment plan.	Almost always in a brokerage account.	Through a financial advisor or directly through a no-load mutual fund through the Internet.	Almost always in a brokerage account.	In local stores, marketplaces, and real estate markets.
Protection	Depositors are insured through FDIC.	Although not insured, guaranteed by U.S. government.	Not insured; brokerage account has SIPC coverage.	Not insured; brokerage account has SIPC coverage.	Not insured; brokerage account has SIPC coverage.	Not insured; brokerage account has SIPC coverage.	Not insured.

One thing should stand out from Illustration 8.11.1: Few of the investments that you are likely to use to build wealth provide any type of protection against losses linked with fluctuations in the markets. Although it is true that the government works daily to help make the investment world safer, only bank and credit union savers have access to direct account insurance.

Federal and state regulators constantly monitor the investment and insurance marketplace for wrongdoing on the part of companies and individuals. Regulations are in place to make sure that a baseline level of safety exists in the event of a firm or system-wide failure that could result in the loss of cash or securities.

- The **Securities Investor Protection Corporation (SIPC)**, for example, protects investors against the loss of cash and securities held at a brokerage firm.
- The limit of SIPC protection is $500,000, which includes a $250,000 limit for cash held in an account.
- SIPC insurance is there to protect investors in case a brokerage firm goes bankrupt (see **Helpful Hint**).

HELPFUL HINT

SIPC insurance does not protect against either the decline in the value of your securities or bad investment advice.

Even with FDIC and SIPC insurance in place, you cannot afford to be complacent about your money or investments. It is important to take steps to be aware of possible frauds, misrepresentations, and consumer rip-offs. You can do this by:

- Always being skeptical of unrealistic promises.
- Never relying solely on reputation or word-of-mouth referrals.
- Verifying details of investment proposals.

Most importantly, you can protect yourself by always applying the principles of diversification. This means spreading your wealth among different assets, accounts, and advisors.

Bernie Madoff: A Cautionary Tale

The man shown in **Illustration 8.11.2** was one of the most respected and influential people on Wall Street. He ran the world's largest **hedge fund**, which is a private investment company that caters to the investment needs of wealthy individuals and organizations. Let's learn a bit more about hedge funds and Bernie Madoff.

ILLUSTRATION 8.11.2

The Originator of a Financial Fraud

Source: features.blogs.fortune.cnn.com.

Hedge Funds

Hedge funds get their name from the investment approaches these firms use to manage client money. **Hedge funds** pool money from wealthy investors and invest in securities or other types of investments with the goal of obtaining positive returns. Hedge funds, however, tend to be less well-regulated than other managed investment products and services, like mutual funds. Because hedge funds are not highly regulated, hedge funds can only solicit investments from accredited investors. An **accredited investor** is someone who has:

- Earned income that exceeded $200,000 (or $300,000 together with a spouse) in each of the prior 2 years and reasonably expects the same for the current year.
- A net worth more than $1 million, either alone or together with a spouse (excluding the value of the person's primary residence).

Here is how Madoff described his hedge fund to investors and federal regulators.

- Madoff told the U.S. **Securities and Exchange Commission (SEC)** that his firm bought holdings in the world's stock markets and "hedged" these positions with options that gained in value whenever stock prices fell.
- Madoff also advertised that he knew when to move between cash and stocks, thus hedging the bets he was making in the markets.
- Madoff claimed that investors in his hedge fund could make between 8% and 10% annually with little downside risk.

This last point is important because it paved the way for one of the biggest frauds in recent history.

Madoff's Fraudulent Scheme

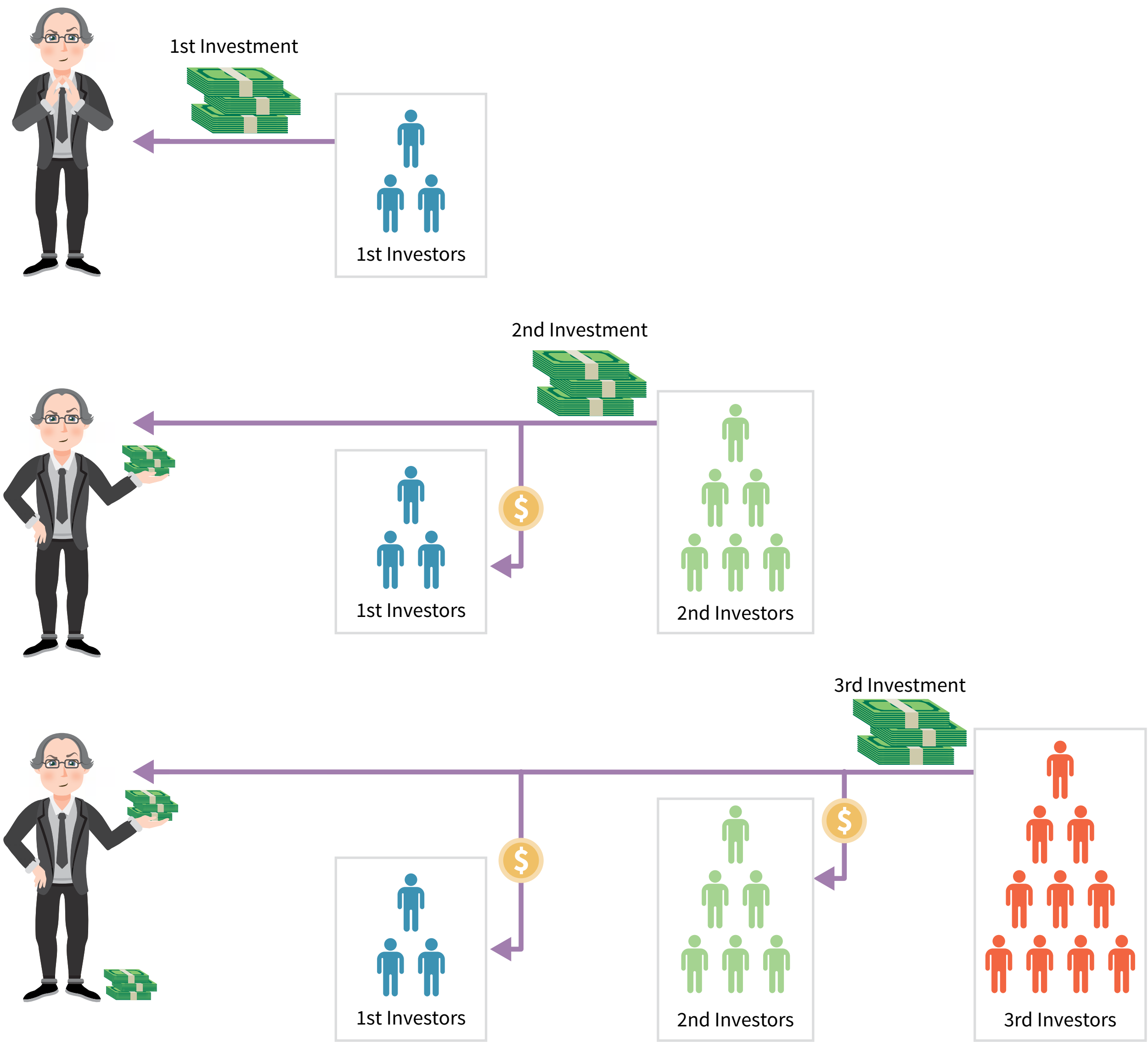
Madoff's firm was so successful that he was able to establish strict standards for those that he would accept as clients. Typically, clients had to have several millions of dollars to invest and be politically and socially connected. Investing with this man was considered a privilege, and people lined up begging to give him their money.

Madoff was able to perpetrate his scheme using the media as a way to promote his investing record. Here are examples of what the financial media reported about Madoff before he was exposed as a fraud.

- Madoff was called the "Investing Wizard" of Wall Street because he offered his clients "100% safe investments with high and extremely consistent rates of return over significant periods of time."
- From 1992 through 2008, financial magazines reported that Madoff's hedge fund was able to generate returns in excess of 9% annually, in every possible market environment.
- Gossip magazines reported that Madoff's clients made up an exclusive club of the rich and famous.

After reading these glowing reports, would you have invested with Madoff? Unfortunately, many people who had the chance answered "yes" without asking the right questions. His clients failed to uncover that Madoff was engaged in running the world's largest **Ponzi scheme**. As shown in **Illustration 8.11.3**, he used money coming into the firm from new investors (new victims) to pay off previous investors (old victims). Few actual investments were ever made. For the fraud to work, Madoff needed to bring in more investors every year. His fraud was exposed when some investors wanted their money back, but Madoff could not find enough new investors to pay them back. When Madoff's fraud was discovered, his clients had already lost an estimated $50 billion!

ILLUSTRATION 8.11.3 **Madoff's Ponzi Scheme**



As you continue your lifetime financial journey you can learn several important things from the Madoff case (see **Helpful Hint**).

1. No matter what an advisor's reputation might be, it is important to document the advisor's promises.
2. It is wise to be skeptical of anyone who promises to generate high consistent returns with low risk.
3. In the investment world, if something seems too good to be true, it likely is an investment rip-off.

HELPFUL HINT

Cases like that of Madoff are actually quite rare; it is therefore important not to paint all financial advisors with a negative brush.

Concepts in Action

Assume that a fraudster using a classic Ponzi scheme starts with 6 investors and plans to increase the number of new investors by a multiple of 6 every year. In other words, the fraudster plans to take money from 6 people in year one, 36 in year two, 216 in year three, and so on. The fraudster's plan is to use money from later investors to pay off previous investors (plus pocket some money along the way). How many years will it take for the fraudster in this scenario to run out of investors if you consider that the world's population is around 13 billion people?

Solution

It will take approximately 13 years before the fraudster in this scenario runs out of investors, as the following shows. This is how Ponzi schemes fail. At some point, the number of potential victims drops to zero.

Year	Investors
1	6
2	36
3	216
4	1,296
5	7,776
6	46,656
7	279,936
8	1,679,616
9	10,077,696
10	60,466,476
11	362,797,056
12	2,176,782,336
13	13,060,694,016

Working with a Financial Advisor

It is likely that at some point you will need professional financial planning and investment advice. Knowing who to turn to and what to expect is an important element associated with protecting your assets and wealth.

The Role of Financial Advisors

The term **financial advisor** is often used to describe a professional who is engaged in the business of providing financial and investment advice for a fee. Sometimes, this fee is paid as a commission. At other times, the fee is a direct payment from the client to the advisor. People of all social and economic backgrounds use the services of financial advisors. Some of the most common services include:

- Helping clients establish financial goals.
- Assisting clients with creating and maintaining spending plans.
- Providing tax advice related to household issues.
- Recommending investment products and services.
- Developing insurance strategies across the life span.
- Helping create a realistic retirement plan.
- Assisting clients with daily financial questions, such as funding education needs for children and grandchildren, purchasing cars and homes, and building emergency savings funds.
- Providing advice regarding wills and estates.

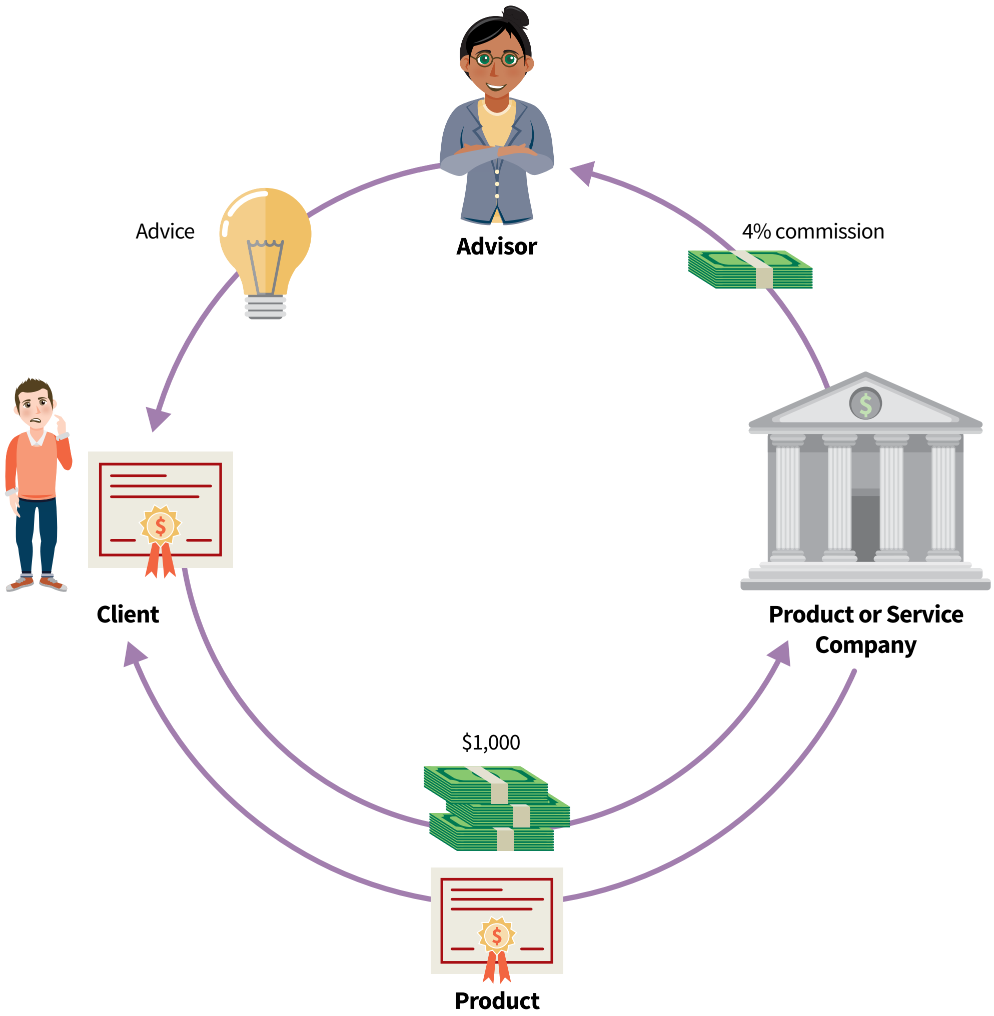
Financial Advisor Compensation

Financial advisors tend to be compensated in one of two ways.

1. **Via commission** (see **Illustration 8.11.4**). A **commission-based financial advisor** receives some or all of his or her compensation from commissions generated when a client buys or sells a financial product.
   - For example, assume that a mutual fund has a 4% commission associated with purchasing shares in the fund.
   - If an advisor recommends the fund to a client who makes a $1,000 purchase, the advisor will earn $40 ($1,000 × 4%). This means that $960 will be invested in fund shares.

ILLUSTRATION 8.11.4

Commission-Based Financial Advisor

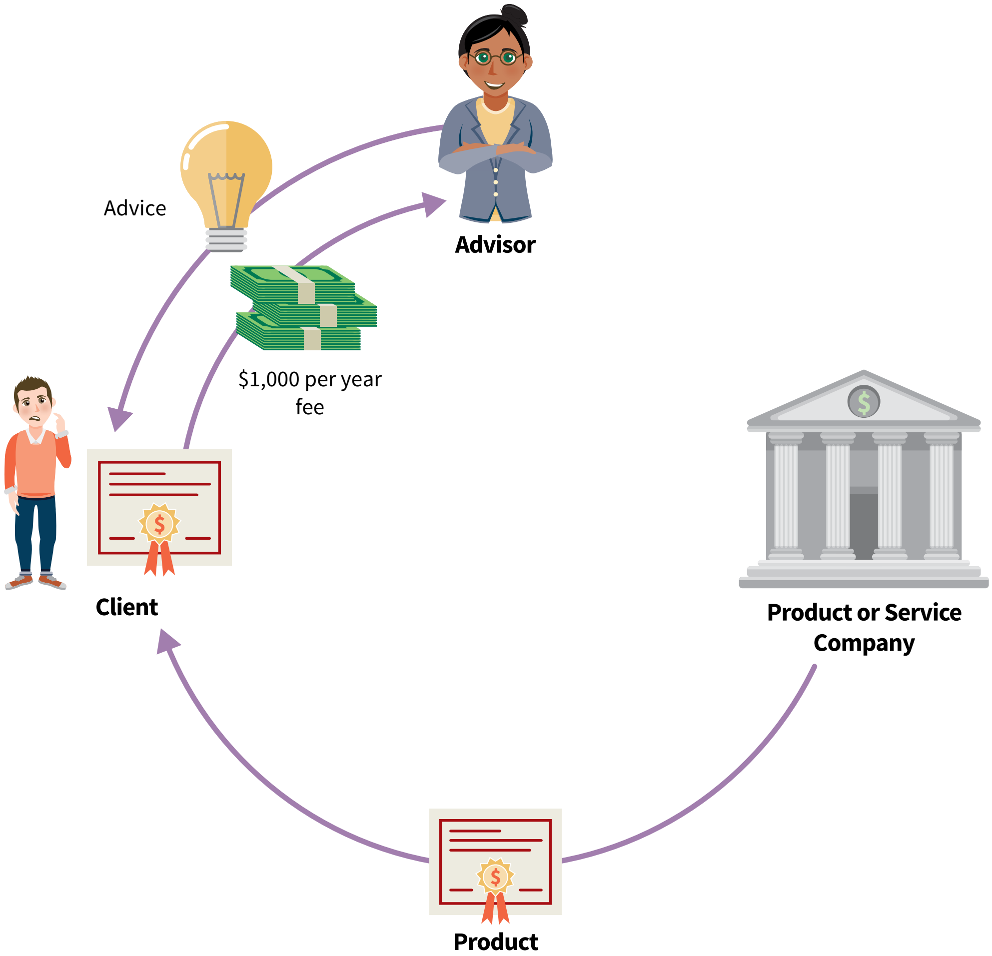


2. **A fee-only model** (see **Illustration 8.11.5**). A **fee-only financial advisor** charges a client directly for services and receives no commissions based on what or how much a client buys.
   - Nearly all fee-only financial planners charge a fee (commonly 1%) associated with managing client portfolio assets.
   - Let's say a client has $100,000 in assets managed by the financial advisor. In this case, the advisor will receive $1,000 ($100,000 × 1%) each year the assets are managed. As the account balance goes up, the fee will increase. If assets go down, the fee will decrease.

Most consumer advocates prefer the services of a fee-only advisor because consumer advocates believe that the compensation approach better aligns the needs of clients with the services of advisors.

ILLUSTRATION 8.11.5

Fee-Only Financial Advisor



Finding the Right Advisor: I COME FIRST

Eleanor Blayney, a respected consumer advocate, developed an acronym that can help when it comes to finding the right financial advisor: **I COME FIRST**.

1. **I**nterview: You should interview at least three financial advisors before hiring one. Initial interviews should always be complimentary (free). You are looking for someone who is competent and honest.
2. **C**redentials: Search for advisors who hold the **certified financial planner (CFP®)** designation or another certification, such as a certified public accountant (CPA®), accredited financial counselor (AFC®), chartered financial analysist (CFA®), or chartered financial consultant (ChFC®) (see **Helpful Hint**).
3. **O**rganizations: Ask how active the advisor is with a local, regional, or national professional organization. Those who are active are more likely to be engaged in continuing education.
4. **M**inimums: Find out if an advisor has a minimum investment requirement and how he or she is paid. Remember, nothing is free. Some advisors will charge you directly, and others will get paid based on the amount of product sold. Either way, you want to know the cost.
5. **E**ngagement: Learn as much as you can about what to expect when working with an advisor. Will you see the advisor monthly, yearly, or very rarely? Also, determine the extent of services offered and the costs associated with every detail.

HELPFUL HINT

Although certifications do not guarantee an honest advisor, it is always comforting to know that the person follows enforceable practice standards and has a minimal level of knowledge and experience.

6. **F**iduciary: A **fiduciary** always places the interests of clients first when providing advice. All registered investment advisers (RIAs), fee-only financial planners, and CFP® professionals must act as a fiduciary.
   - CFP® professionals must follow the fiduciary standard when providing *comprehensive* financial planning services to a client, meaning the incorporation of cash flow, tax, and other factors into strategies when making recommendations.
   - Whenever possible, it is best to work with someone who is a fiduciary because a fiduciary, by law, must put your interests above his or her own. If the fiduciary doesn't, you can be compensated or the financial advisor can get into serious trouble.
7. **I**ncome: Everyone must get paid. Ask your advisor how he or she is paid. Honest advisors will always provide full disclosure about this issue, regardless if they are paid via commission or some type of fee approach (see **Helpful Hint**).
8. **R**eferences: Always ask to speak to current clients. You really do want your financial advisor's philosophy and approach to match you as a person. Also, you want to make sure the financial advisor's advice was helpful to others.
9. **S**pecialty: Just like there are both general and specialized medical practitioners, the same is true with financial advisors. Ask what an advisor's interests and strengths are to make sure that there is a good match with what you need.
10. **T**ypes of clients: This last point is essential. It is critical that your advisor is comfortable working with you and understands your needs. There is no reason to hire someone who only deals with wealthy clients if you need budgeting and basic investing help.

HELPFUL HINT

Avoid advisors who hesitate to disclose information about their compensation!

Following the I COME FIRST approach can help to ensure that the financial advisor you select will put your interests first when it comes to growing and protecting your wealth. Although working with the right financial advisor can provide you with valuable benefits over the course of your financial journey, you need to remember that it is also possible to create a plan and navigate your financial future on your own.

End-of-Topic Assessment

Multiple-Choice Questions

1. Lawrence is a retiree. In addition to Social Security benefits, he has a small pension plan from a former employer. Lawrence is looking for an investment that will generate income during his retirement. He does not need governmental insurance for his investment, but he does not want to take on too much risk. Which of the following investments will best meet his need?

- **a.** I savings bonds.
- **b.** Real estate.
- **c.** Stocks.
- **d.** Bonds.

2. Which of the following investment has the lowest risks and lowest returns?

- **a.** Real estate.
- **b.** Exchange-traded funds.
- **c.** EE savings bonds.
- **d.** Money market savings accounts.

3. Larry recently opened a brokerage account with a small firm located in Colorado. He opened the account with $45,000, which was held in a cash account at the firm. Earlier this year, he purchased $5,000 in stock. The price has fallen and the stock is now worth $1,000. Early today, Larry learned that the brokerage firm went out of business. Larry is panicked. Help Larry understand what will happen by choosing the correct statement from those listed.

- **a.** Larry need not worry because his entire $45,000 loss is covered by FICA.
- **b.** Larry will lose 100% of everything held in the brokerage account.
- **c.** Larry will get back $40,000 in cash, $1,000 in stock, and $4,000 in stock losses from SIPC.
- **d.** Larry will get back $40,000 in cash and $1,000 in stock from SIPC.

4. Alberto is just beginning his career in the financial services industry. He has been studying the markets for a number of years and has figured out a way to generate consistently high returns for his clients while taking low risk. His approach involves using money from new investors to pay interest to clients who have been invested for a longer period of time. Alberto's investment approach is called a:

- **a.** diversification tactic.
- **b.** hedge fund.
- **c.** Ponzi scheme.
- **d.** fiduciary allocation.

5. Which of the following is an indication that a financial advisor may be engaged in a financial fraud?

- **a.** The advisor tells you that she has earned approximately 10% per year over the last 15 years without a losing year.
- **b.** The advisor claims that he can use stock options to hedge potential losses in a portfolio as a way to reduce investment risk.
- **c.** The advisor recommends that you invest no more than 10% of your portfolio in hard assets, with the remainder allocated among stocks and bonds.
- **d.** Consistent earnings without losing over long time periods, using stock options to hedge risk, and recommendations to limit allocations to hard assets are all signs of financial fraud.

6. **Calculate** Emily is working with a commissioned-based financial planner. The financial planner is recommending that Emily purchase shares in a mutual fund that charges a 5% commission. If Emily invests $10,000, how much will the advisor be paid?

- **a.** $50.
- **b.** $450.
- **c.** $500.
- **d.** $5,000.

7. **Calculate** Emily is working with a commissioned-based financial planner. The financial planner is recommending that Emily purchase shares in a mutual fund that charges a 5% commission. If Emily invests $10,000, and after Emily's financial planner has been paid, how much will be invested in the mutual fund?

- **a.** $9,500.
- **b.** $9,550.
- **c.** $9,950.
- **d.** $10,000.

8. Lindsey works as a comprehensive financial planner. When working with clients, she looks at someone's entire financial situation and makes recommendations across several financial areas. She is also a CFP®. As such, Lindsey:

I. cannot charge a fee for her investment advice.
II. must act as a fiduciary.
III. specializes in investment management rather than general financial planning.

- **a.** II only.
- **b.** I and II only.
- **c.** II and III only.
- **d.** I, II, and III.

9. Which of the following statements regarding a certified financial planner (CFP®) professional is *false*?

- **a.** A CFP® professional only works with accredited investors.
- **b.** A CFP® professional may charge a commission for services or products.
- **c.** A CFP® professional must put the interests of his or her clients first.
- **d.** A CFP® professional may charge a fee for her or his services.

10. As you set out on your financial journey, it is best to choose a financial advisor that:

I. works with clients who have more income and wealth than you do.
II. understands your financial goals.
III. discloses all conflicts of interest.

- **a.** III only.
- **b.** I and II only.
- **c.** II and III only.
- **d.** I, II, and III.

Adventures in Personal Finance

Short Answer

1. Explain the relationship between risks and expected returns.
2. What are the limits associated with SIPC insurance?
3. What steps can you take to protect yourself from financial frauds and rip-offs?

Explore

1. **Presentation** By law, all stockbrokers must hold a securities license regulated by Financial Industry Regulatory Authority, Inc. (FINRA). Information about every broker operating legally in the United States is available online at the **BrokerCheck** website operated by the FINRA. Use this site to find securities brokers working in your neighborhood by inputting your zip code in the Search box. Check the status of at least five brokers in your area. Report to your class on any that have had a complaint or suspension registered against them.

2. **Writing** **Presentation** Compare and contrast the insurance protection offered by FDIC and SIPC. Summarize the similarities and differences between these two types of insurance in a brief paper. Be sure to share the results of your analysis with others in class.

3. As discussed in this topic, it is important to identify and interview at least three financial advisors when seeking financial planning or investment advice. The first step in the interviewing process involves finding information about different advisors. Visit the **CFP Board of Standards, Inc.** website and search for at least three CFP® professionals in your area. Make a table to summarize information about how each advisor is compensated, the minimum investable assets required of clients, and any disciplinary history and bankruptcy information for the advisor. Given your research, which of the three advisors would you seek out today to interview? Why?

Expanded Learning Activity

Writing **Presentation** New laws related to the legalization of marijuana for both recreational and medical purposes took effect in January 2014. As you can imagine, this has led to a proliferation of investment scams, frauds, and rip-offs associated with these developments. *Pump-and-dump scams* related to legalized marijuana involve setting up a publically traded company that is theoretically going to be involved in the new industry. These are usually microcap stocks. The stock promoters then “pump” up the stock through e-mails, cold calling, fliers, and bogus new reports. Once investors begin investing, the stock price moves up. The price movement brings in more investors who pay a higher price; however, these new investors end up buying worthless shares sold by the company’s promoters. Once the promoters have “dumped” their shares, the price falls. Conduct an Internet search of one or more microcap stock(s) that can be classified as a pump-and-dump scam. Write a brief report about your findings and share the results with your classmates.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

8.1 Explain what a stock represents and how it can create wealth. Within the investment world, stocks are one of the most important investments. Ownership of stock represents equity in a firm. Investors use stocks within a portfolio to generate higher returns through capital gains and the receipt of dividends. There are thousands of companies worldwide that issue stock. This means that, as an investor, you can build a diversified portfolio of stock that matches your time horizon, risk capacity, and risk tolerance.

8.2 Discuss how stocks are traded and valued. To purchase and sell stocks, you must have a brokerage account. The price at which stocks are bought and sold depends on how the buyer and seller value stock. There are several different ways to value a stock. The discounted dividend valuation model bases stock valuation on the present value of future dividends and places a high emphasis on dividend growth rates. Other methods of valuing stock include evaluating a stock's P/E ratio, earnings per share, dividend yield, and other metrics.

8.3 Describe a bond and how it differs from a stock. Bonds are a safer way to invest in companies, governments, and local municipalities. Bonds are issued by businesses and governments to raise money to expand or improve infrastructure. Owning a bond is representative of being a lender. Bondholders are entitled to receive interest on their investment. Compared to owning stock, bonds provide more protection and less risk. First among these is the right to receive interest before stockholders receive dividends. Also, if a company were to declare bankruptcy, a bondholder is more likely to be paid back before a stockholder.

8.4 Identify the benefits and options that mutual funds provide to investors. Mutual funds are investments that pool individual investors' money for the purpose of hiring a professional investment manager who uses investment capital to build a well-diversified investment portfolio. Individual investors with limited funds can purchase shares in a mutual fund, which provides diversification with a small investment. Diversification reduces some of the risks associated with investing; however, diversification can't eliminate all risk. Mutual funds are either actively or passively managed. Active managers try to outperform their comparative investment market (i.e., the stock market). Passive managers attempt to mirror a specific aspect of the market, such as an index. Passive managers outperform the majority of actively managed mutual funds.

8.5 Describe the advantages and use of exchange-traded funds compared with mutual funds. Exchanged-traded funds (ETFs) are a relatively new investment alternative. ETFs are similar to mutual funds in providing immediate diversification, liquidity, and marketability. An important difference, however, is that ETFs tend to trade like stocks. This means that ETF shareholders can sell their shares any time the securities markets are open, whereas a mutual fund shareholder can only buy or sell shares one time per day. Another difference between mutual funds and ETFs is that the majority of ETFs track a market index, whereas nearly all mutual funds are actively managed. As a result, ETFs rarely provide returns in excess of the markets. However, the annual expenses associated with ETFs tend to be quite low, which is an advantage for ETF investors.

8.6 Recognize the opportunities, benefits, and risks of investing internationally. The U.S. economy is the largest in the world, but other countries may have faster-growing economies or enjoy other positive macroeconomic characteristics that support strong stock market growth in those countries. Americans, as do residents from most other countries, have a strong familiarity bias and favor investments from their own country. This can significantly limit the investment opportunities of individuals. Owning international investments can help your portfolio grow while reducing risks through diversification.

8.7 Discuss the expected relationships among risk, return, and marketability. Financial risk can mean how volatile prices are over time and how much returns fluctuate. Risk, however, can encompass other things as well, including liquidity, marketability, default, and inflation. An essential element associated with investment success involves assessing the risk associated with a particular investment, matching the risk characteristic of an investment to your risk tolerance, and managing risk on an ongoing basis. It's possible to manage risk by building diversified portfolios of assets with varying levels of risk. Diversification is a valuable tool that reduces the unsystematic risk faced by an investor.

8.8 Describe brokerage accounts and the different types of brokerage firms. A brokerage account is a prefunded arrangement between you and a broker–dealer firm that allows you to buy and sell investment assets. You can choose between full-service or self-directed brokerage firms. Full-service brokerage firms offer the services of investment representatives or stockbrokers. Self-directed firms charge fewer fees. Investors can place a variety of different types of orders when buying and selling stock, such as market, limit, and stop orders.

8.9 Explain why some investors prefer to hold and invest their wealth in real estate. When viewed in the investment world, real estate is near the top in terms of riskiness. The reason is that real estate investments—both residential and commercial—are generally made in local limited markets. This, in turn, reduces the liquidity of most real estate investments. Even so, many investors prefer owning real estate because this asset provides diversification within a portfolio, generates stable income from rents received, and allows the owner to be directly involved in day-to-day management. For those who prefer to avoid the hassles involved in owning real estate directly, it is possible to invest in real estate through real estate investment trusts (REITs). REITs are similar to mutual funds in providing diversification within the real estate markets nationally and sometimes internationally.

8.10 Identify how supply and demand, spreads, and level of specialization affect the value of alternative investments. There is an entirely different and much older world of investing that involves collectibles, auctions, and pawnshops. The phrase *tangible investing* describes the world of collectibles and other hard assets (such as gold, silver, artwork, stamps, minerals, and real estate). The role of the creator, hobbyist, collector, investor, and dealer all play a part in the tangible

investment market. Some tangible markets are less efficient than others, which results in a larger spread between the bid price and the ask price. Generally, the larger the market (more buyers and sellers), the smaller the spread.

8.11 List ways to protect your investments from losses and frauds. It's possible that sometime during your lifetime financial journey, you may need help dealing with a financial issue, concern, or question. At that point, it makes sense to reach out to a financial professional. There are literally dozens of alternatives available when it comes to getting help. The acronym "I COME FIRST" was developed to help consumers identify competent financial help: **I**nterview, **C**redentials, **O**rganizations, **M**inimums, **E**ngagement, **F**iduciary, **I**ncome, **R**eferences, **S**pecialty, and **T**ypes of clients.

Continuing Case: Tarek's Financial Journey

Tarek and Samantha, who are both age 26, got married last month. Now that they're married and building a household together, they're beginning to think more seriously about investments and retirement planning. Tarek's financial risk tolerance is on the high end of the moderate range. Samantha, on the other hand, has a relatively low level of financial risk tolerance. When faced with a saving or investment decision, she would prefer to stick with a sure thing rather than take an unnecessary risk. She knows, however, that to reach their joint financial goals that they, as a couple, will need to coordinate investment decisions and be willing to take more risk. They decided that they would try to obtain a long-term average rate of return of 8%.

Instructions

Based on this information and what you know of Tarek and Samantha from previous chapters, answer the following questions.

a. Given their individual and joint risk tolerances and rate of return objective, what types of investments would be most appropriate for them to use in their household portfolio?

b. Tarek and Samantha recently opened a joint online brokerage account. Tarek has identified four stocks that he's interested in buying. Information about the four stocks is shown here. Use this information to determine which of the stocks is a bargain according to the discounted dividend valuation model.

	Stock A	Stock B	Stock C	Stock D
Dividend	$ 0.50	$ 0.95	$ 2.45	$ 3.60
Dividend Growth Rate	4.50%	2.00%	3.30%	1.50%
Current Price	$19.50	$15.00	$45.00	$73.25

c. Samantha isn't excited about individual stock ownership because she and Tarek will not be sufficiently diversified. She convinced Tarek that they should instead purchase mutual funds that invest in stocks. They identified the following four mutual funds, each of which invests in large-company stocks. The two passive funds seek to track the S&P 500 Index. Assuming similar risks across the funds, which of the four mutual funds would be the best purchase? Why?

	Fund A	Fund B	Fund C	Fund D
Management Approach	Active	Passive	Passive	Active
Annual Expense Ratio	1.5%	0.4%	0.30%	1.3%
Max Sales Load	5.0%	0.0%	0.0%	4%

d. Assume that Samantha begins contributing $3,000 per year into a retirement investment account. If she can earn an average annual return of 8% on her investment, how much will she have accumulated at age 67?

e. Samantha knows that she wants to reduce the amount of unsystematic risk in investments. What type of investment would offer her immediate diversification as a way to reduce this risk?

Calculating the Cost of Life's Financial Journey

Charles and Chelee recently had their first child. They're excited about building their family together. Chelee wants to begin a college savings fund for their child immediately, whereas Charles wants to wait a few years (he'd like to use extra cash flow to buy a new minivan and some household items instead). Chelee has identified a college savings plan that provides a relatively high rate of return for those who start saving early. The plan is set up so that over time the allocation of stocks in the plan falls as the child gets closer to college age and the allocation to bonds is increased. This means that the expected rate of return also falls over time. The rate of return figures Chelee obtained from the savings plan as follows:

Child Age	Stock Allocation	Fixed Income Allocation	Expected Return
1	100%	0%	9.5%
2	95%	5%	9.0%
3	90%	10%	8.6%
4	85%	15%	8.1%
5	80%	20%	7.6%
6	75%	25%	7.1%
7	70%	30%	6.7%
8	65%	35%	6.2%
9	60%	40%	5.7%
10	55%	45%	5.2%
11	50%	50%	4.8%
12	45%	55%	4.3%
13	40%	60%	3.8%
14	35%	65%	3.3%
15	30%	70%	2.9%
16	25%	75%	2.4%
17	20%	80%	1.9%
18	10%	90%	1.0%

Instructions

a. If Chelee can convince Charles to begin saving $3,000 per year for the next 18 years, how much will they have in the college savings plan when their child enters college?

b. How much will they have in the plan if Charles prevails and they begin saving $3,000 per year when their child turns 5?

c. How much will they accumulate if they wait to begin saving until their child is 10?

d. If their ultimate goal is to accumulate the maximum amount in a college savings account, what should they do?

Planning for the Future

Ayasha, age 30, is beginning to contemplate her financial future. Right now, she lives in a large city where she rents a one-bedroom apartment. Although she loves the excitement of the city, she knows that someday she would like to move to the country and live in a farmhouse. Her goal is to begin saving for this objective right away. Ayasha has identified three possible portfolios that might be appropriate choices as she begins investing to reach her objective. Each portfolio consists of the following stocks, bonds, and cash assets.

Portfolio 1	Portfolio 2	Portfolio 3
10% cash	10% cash	15% cash
20% bonds	40% bonds	50% bonds
70% stocks	50% stocks	35% stocks

Instructions

a. Calculate the weighted average rate of return for each portfolio, assuming that the average return of each asset is as follows. (*Hint:* Multiply the allocation percentage by the rate of return to determine the "weighted average" for the asset: stocks 9%, bonds 4%, and cash assets 2%.)

b. Which portfolio has the greatest level of uncertainty associated with the returns? How can you tell?

c. If Ayasha's risk tolerance is below average and she has a long-time horizon (15 years), which of the three portfolios would be most appropriate for her?

d. If Ayasha's time horizon for goal achievement is 4 years, which portfolio would be most appropriate?

e. What type of risk does Ayasha face if she invests in portfolio 3?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER 9

Risk Management: The Role of Insurance

Caiaimage/Trevor Adeline/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

9.1 Describe the importance of health management and general insurance.

9.2 Explain the options, costs, and requirements associated with health insurance.

9.3 Discuss the need for disability insurance and the key features of disability insurance policies.

9.4 Describe the types of life insurance policies and how to develop a plan for optimal life insurance coverage.

9.5 Identify the need for automobile insurance and the key coverage elements to include as part of an automobile insurance policy.

9.6 Describe the benefits of insurance to protect the personal and real property of homeowners and renters.

9.7 List different strategies and available insurance for meeting long-term care needs.

Everyone faces risks during his or her lifetime financial journey. Some people close their eyes to risks and hope for the best. Others act to prepare for possible accidents and unforeseen events. In this chapter, you'll learn about insurance, which is an important tool people use to manage risk and prepare for what might happen.

We start with a discussion about one of the biggest threats to your financial well-being, which is poor health. As you'll learn, your health is one of the most important factors influencing your ability to accumulate wealth during your lifetime financial journey. The discussion then moves on to introduce specific types of insurance policies that can be used to help protect you against threats to your health: health insurance, disability insurance, and life insurance. We then discuss ways you can protect yourself against claims that result from the use of your property: auto insurance, homeowner's insurance, and renter's insurance. The chapter concludes with a review of long-term care insurance. Because your insurance needs will change over time, it is wise to review your insurance policies each year.

Risky Behavior?

Before jumping into the actual topics that make up this risk-management chapter, let's take a side trip to determine how risk-savvy you are right now. The following questionnaire

was developed using U.S. government statistics. See how well you do in spotting the true risk in each situation.

Identifying the Real Risk

	Interpretation	Score
1. What does the average consumer pay every time he or she has a hospital stay? **a.** Less than $3,000. **b.** Between $3,000 and $10,000. **c.** More than $10,000.	If you answered **c**, give yourself 1 point.	_____
2. What is the number one reason men die in the United States? **a.** Lung disease. **b.** Heart disease. **c.** The flu.	If you answered **b**, give yourself 3 points.	_____
3. What percentage of the U.S. population reports having a physical disability? **a.** 22%. **b.** 45%. **c.** 80%.	If you answered **a**, give yourself 2 points.	_____
4. What is the average cost of a funeral in a typical large population city? **a.** Less than $1,000. **b.** Between $1,000 and $6,000. **c.** More than $6,000.	If you answered **c**, give yourself 3 points.	_____
5. What is the approximate average life expectancy of an American today? **a.** 79 years. **b.** 86 years. **c.** 93 years.	If you answered **a**, give yourself 1 point.	_____
6. What is the average annual minimum cost of a nursing home in the United States today? **a.** Less than $22,750. **b.** Between $22,750 and $47,500. **c.** $47,500 or more.	If you answered **c**, give yourself 2 points.	_____
7. How much does a typical renter's insurance policy cost per month? **a.** Between $3 and $15. **b.** Between $8 and $10. **c.** Between $15 and $17.	If you answered **c**, give yourself 1 point.	_____
8. How many people die in automobile crashes each year in the United States? **a.** About 18,000. **b.** About 33,000. **c.** About 90,000.	If you answered **b**, give yourself 1 point.	_____
9. How much can a healthy 25-year-old female expect to pay for $1 million in term-life insurance coverage? **a.** Less than $1,000 per year. **b.** $1,000 –$2,000 per year. **c.** More than $2,000 per year.	If you answered **a**, give yourself 2 points.	_____
10. What is the annual average flood loss claim for homeowners who experience a flood in the United States? **a.** $12,000. **b.** Between $12,000 and $22,000. **c.** $42,000.	If you answered **c**, give yourself 3 points.	_____
	Total:	_____

How did you do? Here's how you can interpret your results:

- If you scored between 0 and 5, you may be significantly underestimating the risks and costs of life in the United States today. You may find the material in this chapter to be quite valuable.
- If you scored between 6 and 11, you have a good sense of some of the key risks facing consumers in today's world. The content presented in this chapter will round out your knowledge and improve your ability to manage risk.
- If you scored higher than 11, you are among the most knowledgeable when it comes to evaluating risks! You already have a good understanding of risk and the costs associated with many of the financial threats facing U.S. families. Even so, you will find the material in this chapter to be of interest.

Insurance: What It Is and Why You Need It

LO 9.1 Describe the importance of health management and general insurance.

Does your health affect your wealth? Yes! People who engage in problematic health behaviors—such as smoking or consuming too much alcohol or unhealthy foods—accumulate less wealth than others. But according to a recent brain research study, most people fail to see the association between the two because they separate events, actions, and attitudes into mental categories that are valued differently. For example, some people have one mental category for "health" behaviors and another for "wealth" behaviors. As a result, these individuals often have a difficult time seeing how health and wealth activities affect each other.

In this topic, we present an overview of the relationship between your health, human capital, and wealth. Just like your financial assets, it is critical to safeguard your human capital and health at the same time.

Human Capital and Health

Human capital encompasses your ability and willingness to work, learn, earn, and make wise decisions about how to save and invest money. As such, human capital represents one of the most valuable assets that you possess. Keep in mind the following points as you begin to develop strategies to safeguard your human capital.

- As you continue to progress in your formal education, gain valuable experience, and receive additional training in your career, your human capital will increase.
- Increased human capital usually results in higher yearly earned income.
- Higher annual income creates the financial capacity necessary to reach your goals.

However, just like there is uncertainty associated with investments, there are also risks to your human capital.

Relationship Between Health and Human Capital

Perhaps the single greatest risk to anyone's human capital is the deterioration of personal health.

- If your health declines, it is more challenging to make and save money. Although you may still be employed, you might end up spending more on healthcare expenditures.
- If your health becomes worse, you may no longer be able to work.

Hardly anyone plans to stop working due to sickness or disability. Rather, it is the unexpected that tends to throw people off their planned life journey. Without preparation, a single negative health event can destroy years of human capital development (see **Helpful Hint**). If this should happen to you, your financial goals, as well as the financial goals of those who depend on you, can quickly move out of reach. Although this discussion may seem disheartening, don't worry. As long as you act while you are healthy, you can protect yourself from most unexpected events.

HELPFUL HINT

Life's financial journey gets more complicated for those with health issues. A healthy person who loses her or his job can recover by learning new skills, obtaining additional training, relocating to find a different job, or starting a business.

The Risk Matrix and Health

It is important to be thinking about strategies to deal with life's threats and risks. There are many threats to good health. Some are common, such as the growing problem of obesity. According to the **National Institute of Health**, obesity can lead to heart disease, high blood pressure, stroke, and type 2 diabetes. Other health risks are sudden and catastrophic, such as injuries sustained in a car accident. A **decision matrix**, such as the one shown in **Illustration 9.1.1**, is often used

ILLUSTRATION 9.1.1

Risk Matrix

Severity of Risk		Frequency or Probability of Risk Event Occurring: High	Medium	Low
	High	Avoid if possible (e.g., don't text while driving).	Avoid (e.g., driving too fast and purchase insurance).	Purchase insurance (e.g., for treatment if diagnosed with cancer).
	Medium	Management of risk required (e.g., use a Bluetooth® headset while driving).	Management is beneficial (e.g., wear a helmet to protect against falling off a bicycle).	Purchase insurance (e.g., to cover costs if involved in an automobile accident).
	Low	Accept the risk or monitor it (e.g., getting caught in a rainstorm without an umbrella).	Accept the risk (e.g., falling while ice skating).	Accept the risk (e.g., airline losing luggage).

Source: Adapted from the Department of Homeland Security, *Risk Management Fundamentals*.

to classify risks and develop appropriate strategies to best manage those risks. You can use this **risk matrix** to help manage your health situation, as well as any other decision that entails personal or household risk.

For example, think about someone who routinely texts while driving.

- As Illustration 9.1.1 shows, both the likelihood (frequency of the risk) and the severity of a car accident while texting are high.
- The rule for situations in which the frequency and severity of risk are high is to **avoid the risk**.

On the other hand, some events are unlikely, and even if they do occur, the severity of loss is low. Think about checking a bag while flying.

- The actual probability of the airline losing your bag permanently is very low.
- Even if lost, the severity, although annoying, is also low (assuming you do not pack high-value items in the luggage).
- Based on the rules in the risk matrix, you should accept the risk rather than avoid flying or buying insurance for lost luggage.

Based on the frequency and the severity of any risk, certain management techniques can be adopted to minimize negative outcomes. For instance, the best way to minimize the high probability and high severity risk of car accidents while texting and driving is **avoidance**. That is, don't text and drive. On the other hand, anyone may become sick or injured at some point, and the natural course of aging brings additional health challenges. Most often, these types of health risks can be classified as low frequency and medium severity. We discuss how to protect against these types of risks next.

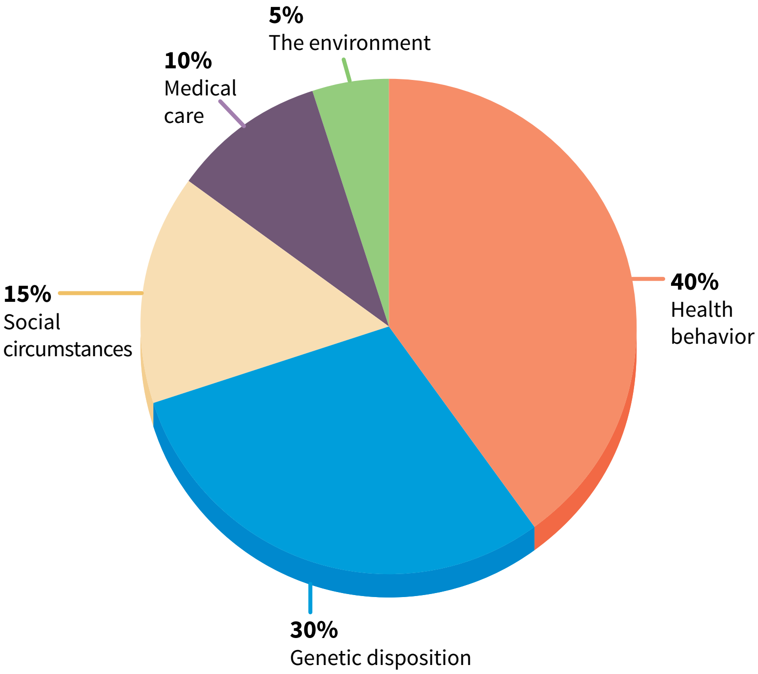
Protecting Your Health

Poor health can be debilitating and completely derail your lifetime financial journey. Unfortunately, sometimes avoiding health risks is just not possible. As a result, you also need to learn how to manage health risks through two strategies: behavior modification and health insurance.

Behavior Modification

There are numerous events and triggers that influence your health. **Illustration 9.1.2** shows the major factors that determine how healthy you are today and will be in the future. Note that your behavioral choices are the best indicators of your current and future health status. These choices relate to your daily activities, including:

- Diet and exercise.
- Safety practices (e.g., wearing seat belts).



Source: J. M. McGinnis, P. Williams-Russo, and J. R. Knickman, "The Case for More Active Policy Attention to Health Promotion," *Health Affairs* (*21*(2), 2002), pp. 78–93. DOI: 10.1377/hlthaff.21.2.78.

ILLUSTRATION 9.1.2

Factors That Determine Your Health

- Stress management.
- Avoidance of substance abuse and addictions.

It turns out that how you approach these activities has a greater determinant on your health than your genetics, where you live, or your social background! This means that your health is significantly under your control (see **Helpful Hint**). Let's turn next to one of the most significant factors, eating healthy.

HELPFUL HINT

Numerous negative health outcomes can be avoided through healthy living and never giving a genetic vulnerability an opportunity to express itself.

Healthy Eating. As you hopefully now realize, maintaining good health is key to achieving your financial goals. Yet nutrition rules and exercise plans can sometimes seem confusing and conflicting. How do you make sense of it all? Consider Francisco, who is a junior in college and slightly overweight. He is now committed to improving his health and has just learned that the **U.S. Department of Agriculture** has useful resources available to help people make healthy eating choices. Some of these resources include:

- Information about the major food groups and how much should be eaten from each of these groups on a day-to-day basis (see **Illustration 9.1.3**).

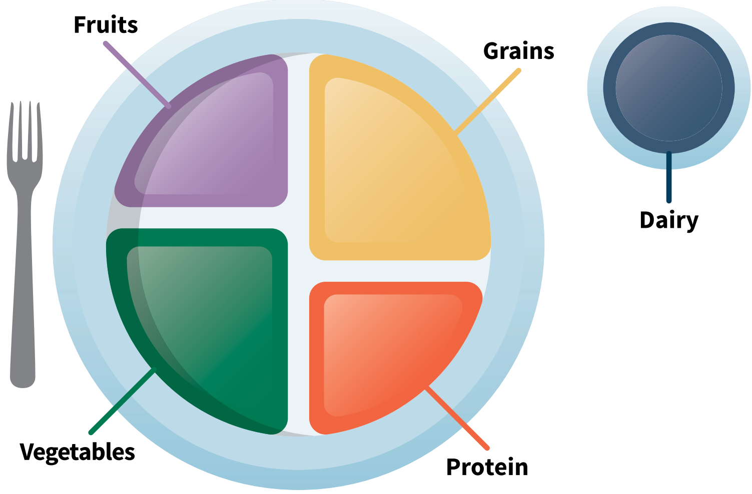


ILLUSTRATION 9.1.3

The U.S. Department of Agriculture's MyPlate Food Recommendations

- An online nutrition-tracking tool. Just like tracking his expenses helps Francisco understand where his money is going on a monthly basis, tracking what he eats can help him identify poor eating habits.

Francisco also found other information at the **Centers for Disease Control and Prevention** website, including:

- Research and other information about stress management, sleep patterns, disease prevention, and mental health.
- Ideas for exercise programs and how much exercise he should strive to do each week.

Francisco soon realized that good health is not just about eating right. Good health also includes moderate exercise, adequate sleep, good safety habits, and avoiding alcohol, drugs, tobacco, and unhealthy relationships.

If Francisco maintains his newly formed, healthy habits, he should see a short- and long-term increase in his human capital.

- While in school, he should begin feeling better and performing at a higher level in his classes. This should result in better grades.
- If he sticks to it, he will likely improve managing other aspects of his life as well. This includes making better financial decisions, which will increase his chances of accumulating wealth over his lifetime.

Health Insurance

Nearly all people buy health insurance coverage (1) in the private marketplace, (2) through their employer, (3) from government agencies, or (4) through the health insurance marketplace. Regardless of where coverage is received, the reason for obtaining coverage is the same: to transfer the risks and costs associated with health-related events to an insurance company.

We discuss health insurance in more detail later in this chapter. First, it is helpful to have an understanding of how insurance companies operate.

Overview of Insurance Companies

Insurance is the primary way people **transfer risk** of a loss to another party, like an insurance company. To take on your risk, an insurance company will likely charge you the following three amounts:

HELPFUL HINT

Health insurance policies often include a coinsurance requirement in addition to or in place of a copayment.

1. A **premium**, which is the cost of the insurance.
2. A **deductible**, which is the amount that you must pay on a claim before insurance comes into play.
3. A **copayment**, which is a cost-sharing amount with the insurance company (see **Helpful Hint**).

How Insurance Companies Operate

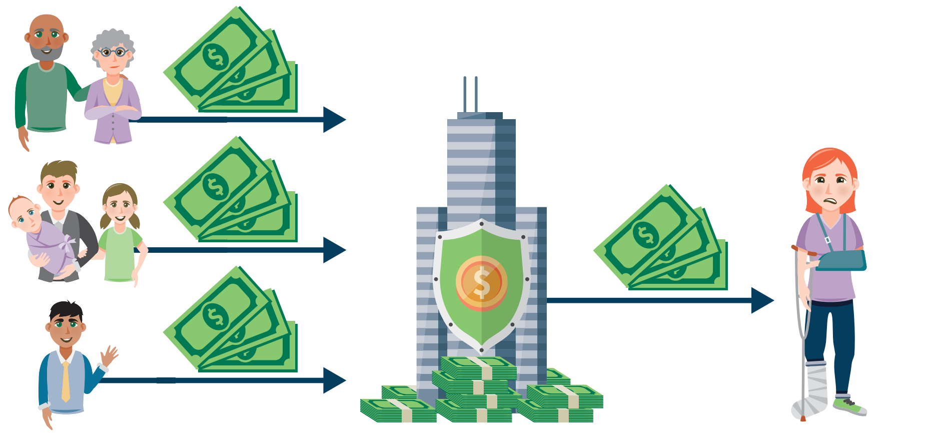
Nearly all insurance companies, regardless of whether they specialize in health, home, auto, or life insurance, operate under similar guidelines and procedures.

- Insurance companies want to minimize their risks, so they prefer to provide protection when the frequency of a loss is relatively low and the severity of loss is modest.
- Insurance companies build large portfolios of assets by pooling *premiums*—the cost a consumer pays for insurance—from thousands, if not millions, of individuals. This helps spread out the severity associated with a few high-cost events.
- If the severity and frequency of a risk increase, then so will the premiums insurance companies charge.

Insurance premiums tend to increase dramatically as the frequency and severity of an event increases. This is true whether the risk is related to your health or property. For example, let's look at the market for flood insurance.

ILLUSTRATION 9.1.4

The Pooling of Premiums to Pay Claims



- In today's insurance marketplace, homeowners can no longer purchase flood insurance directly from private insurers. Because the frequency of significant flooding is high and the severity of losses tends to be catastrophic, private insurance companies pulled out of the market (see **Helpful Hint**).
- Once the largest insurance firms stopped issuing flood insurance, homeowners living in flood-prone areas faced large potential losses. As a result, the federal government stepped in to provide subsidized flood insurance to those living in areas with a history of flooding. Homeowners can now purchase flood insurance from the **Federal Emergency Management Agency (FEMA)**.

HELPFUL HINT

Private insurers have historically been unable to pool enough people together to purchase flood insurance in a way that makes the product profitable.

How Insurance Companies Make a Profit

Insurance companies invest the premiums received from those they insure in real estate, bonds, stocks, and other investment assets. Insurance companies then use the earnings from these investments to pay claims for those who are affected by an event. This process is shown in **Illustration 9.1.4**.

You should always remember that insurance companies are in business to make money.

- Insurance companies make money by offering insurance on low-frequency events that do not generally result in extremely high losses.
- Over time, insurance companies may decide to cancel policies or stop issuing new policies. This can occur when insurance companies conclude that the frequency of an event is greater than expected or the cost of paying claims is too high.
- Insurance companies are also on the lookout to make sure that people do not profit from a claim (see **Helpful Hint**). Insurance is designed to compensate individuals (the policy owners) only up to the value of their loss. This is known as the principle of **indemnity**.

HELPFUL HINT

If an insurance company believes that one person or a group of people are making claims primarily to profit from a loss, the company can dispute the claim(s) or cancel policies.

Concepts in Action

Why would hurricane insurance be more expensive if you live in Miami, Florida, compared with Cleveland, Ohio?

Solution

The cost of obtaining hurricane insurance for those living near the ocean can be high because these storms are common and often cause severe damage. Someone living far inland may be able to purchase the same hurricane coverage for just a few dollars a month because the frequency of a hurricane occurring inland is relatively low, and the damage tends to be minimal.

End-of-Topic Assessment

Multiple-Choice Questions

1. For nearly all young adults working, their greatest asset is:
   - **a.** human capital.
   - **b.** social capital.
   - **c.** an employer retirement plan.
   - **d.** student loan debt.
2. How can Armand increase his human capital?
   - **a.** Go back to college for additional training.
   - **b.** Go back to college or engage in healthy behavior.
   - **c.** Engage in healthy behavior.
   - **d.** Diversify his investment portfolio.
3. The frequency of being involved in an automobile accident while texting is:
   - **a.** high.
   - **b.** low.
   - **c.** somewhere between low and medium.
   - **d.** impossible to determine, which explains why insurance premiums are so high.

Use the following information for Questions 4 and 5: Blakely and Marty have been dating for 3 years. Marty is interested in going skydiving. Marty's tolerance for extreme activities is very high. Blakely's risk tolerance is a lot lower. When discussing the activity, Marty tells Blakely that they will be in a secure plane and that the parachutes they will use have been hand-packed and checked by three people. In the end, Marty makes the jump but Blakely does not.

4. Blakely's risk control strategy was to:
   - **a.** transfer the risk.
   - **b.** manage the risk.
   - **c.** avoid the risk.
   - **d.** minimize the risk.
5. Marty's risk control strategy involved:
   - **a.** transferring the risk.
   - **b.** managing the risk.
   - **c.** avoiding the risk.
   - **d.** eliminating the risk.
6. A problem with living an unhealthy lifestyle is that the:
   - **a.** severity of future risks increases over time.
   - **b.** frequency of future risks increases over time.
   - **c.** ability to transfer risks increases over time.
   - **d.** severity and frequency of future risks increases over time.
7. Living a healthy lifestyle and engaging in healthy behaviors are examples of all the following risk-management strategies, *except*:
   - **a.** avoidance.
   - **b.** transference.
   - **c.** retention.
   - **d.** management.
8. The number-one determinant of someone's health is __________, followed by __________.
   - **a.** social circumstances; environmental exposures
   - **b.** genetic disposition; medical care
   - **c.** medical care; health behavior
   - **d.** health behavior; genetic disposition
9. Maintaining good health requires someone to:
   - **a.** eat right.
   - **b.** exercise.
   - **c.** get enough sleep.
   - **d.** eat right, exercise, and get enough sleep.
10. If Nicole buys health insurance, she is effectively:
    - **a.** transferring the risk of high health-related expenses to an insurance company.
    - **b.** accepting the risks associated with major medical expenses.
    - **c.** retaining the costs associated with health risks.
    - **d.** avoiding the fact that she might become ill in the future.

Adventures in Personal Finance

Short Answer

1. What should someone do if faced with a risk that would cost a lot if the event occurred but the probability of its occurrence is relatively low?
2. Explain how insurance works as a way to transfer risk.
3. **Writing** Good health habits are often difficult to develop. Some ways to develop new habits are to incorporate the new behavior into existing routines, provide yourself with a reward (sometimes a reward is as simple as the satisfaction of having done something), and involve other people who are trying to reach the same goal (a support group). Think of a health habit you would like to change. Develop a short plan on changing that habit and then write a paragraph about how you will change this habit.

4. The following is a list of factors known to shape health outcomes. Give an example of each factor that has an impact on your health today. Which factor do you believe is the least important in shaping your health outcomes?

- Environmental exposures.
- Medical care.
- Social circumstances.
- Genetic disposition.
- Healthy behavior.

Explore

1. Go to the **MyPlate** website and enter your age, height, weight, and physical activity into the online daily menu to answer the following questions:
   - **a.** How many calories should you eat each day?
   - **b.** How many servings of vegetables, fruits, grains, proteins, and dairy should you be eating each day?
   - **c.** Think back about what you ate yesterday. How many servings did you eat in each of the five food groups?
   - **d.** Did you do better or worse than what is recommended? If your diet was not as healthy as it could have been, what changes would be easy to make to improve it?

2. **Writing** **Presentation** Good health is a broad subject but is often viewed narrowly as only relating to diet and exercise. Although diet and exercise are important, what are some other aspects of good health that affect you? Take a moment to think about the different activities that you engage in that pose a risk to your health, especially those activities that could result in diminished human capital as a result of permanent serious injury.
   - **a.** What are the activities?
   - **b.** What risk-management measures can you take to reduce the risk?
   - **c.** Could you purchase insurance for this risk? Would the insurance be affordable?

Briefly summarize your responses to these questions in no more than 500 words. Share your answers with others in class. Discuss the similarities and differences among students.

Expanded Learning Activity

Writing Visit the **Centers for Disease Control and Prevention** website to search for information on how much physical activity adults should get each week. There are various combinations of moderate or intense aerobic exercise coupled with muscle-building workouts. Use the information provided on the website to address the following questions. Write your answers in a brief report.

- In a week, how many times should an adult participate in muscle-building exercises?
- How many minutes per week should individuals engage in primarily intense aerobic exercises?
- Think back about the physical activity you engaged in over the past week. How many minutes were you doing aerobic exercises? Was it at a moderate or intense level? How many muscle-building workouts did you participate in during the past week?
- Did you do better or worse than what is recommended? If your level of exercise was lower than recommended, what changes would be easy to make to improve?

Health Insurance

LO 9.2 Explain the options, costs, and requirements associated with health insurance.

Risks to your health are often unexpected and can be financially catastrophic. One of the best ways to deal with these risks is through a combination of *avoidance* and *management* strategies, such as behavior modification. But it is also important to purchase insurance to protect against the possibility of a catastrophic financial outcome.

Health insurance is a financial tool that allows individuals to manage the unpredictable and potentially excessive costs associated with health care. Health insurance serves as a way to transfer some of your healthcare risks to an insurance company. Health insurance is not inexpensive, but the benefits that health insurance provides make its purchase an excellent financial decision. In this topic, we discuss why you should have health insurance and how to identify your best options.

Overview of Health Care

Healthcare Expenses

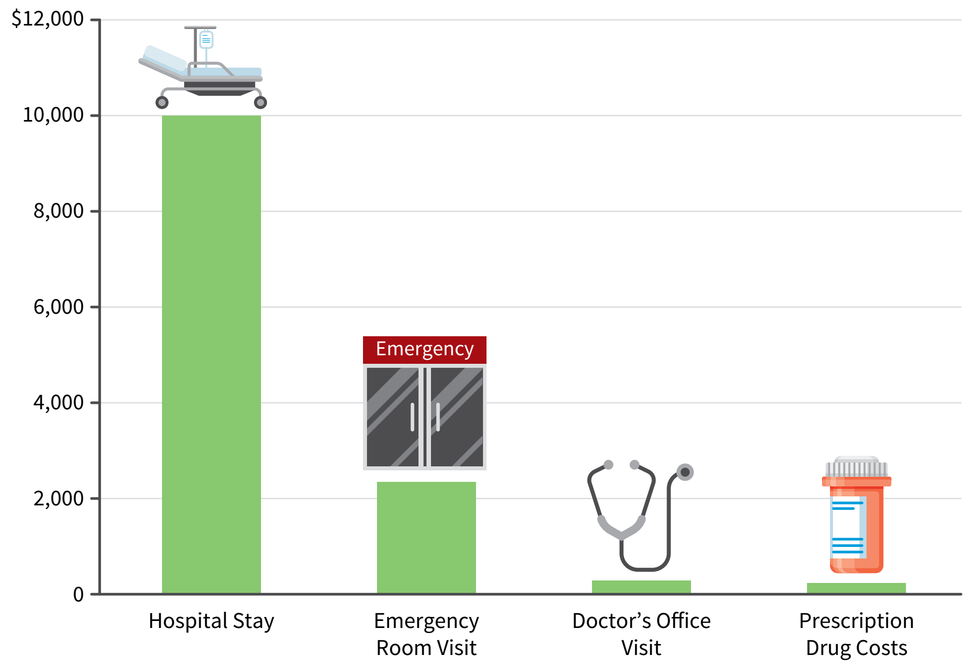
HELPFUL HINT

For many young adults in their twenties, average healthcare expenses are no more than a few thousand dollars per year.

Besides housing, transportation, and taxes, healthcare expenses make up one of the most significant monthly costs for most households. The cost of a routine hospital stay can run $10,000 or even higher depending on the medical need (see **Illustration 9.2.1**). Further, healthcare expenses—both in terms of premiums and out-of-pocket expenses (discussed later in this topic)—tend to increase as you age. If you are young, costs can be quite low (see **Helpful Hint**).

ILLUSTRATION 9.2.1

Average Healthcare Costs for Those in Their Twenties



Source: National Center for Health Statistics, *Health, United States, 2013: With Special Feature on Prescription Drugs* (Hyattsville, MD: U.S. Department of Health and Human Services, 2013), Tables 78 and 87.

How likely is it that you will incur one of these expenses shown in Illustration 9.2.1?

- About 25% of young adults visit the emergency room every year.
- Almost 50% of young adults will visit a doctor one to three times in a year.
- Around 10% will have more than 10 visits to a doctor or hospital during the year.

This means if you are in your twenties, you have about a one-in-five chance of spending $800 or more in healthcare costs each year. Keep in mind that this figure does not include the premiums you will pay for your insurance policy or expenses related to dental or eye needs or over-the-counter medications.

Health Care: The Government Perspective

Because of the potential catastrophic costs associated with healthcare needs and the resulting dire consequences for some households, the government has acted to make sure that all Americans have access to health insurance coverage.

- The decision regarding what type of insurance to purchase depends on your access to a policy, your health status, the risks you take, and the cost of health insurance coverage.
- In 2010, Congress passed the **Patient Protection and Affordable Care Act**, sometimes called the *Affordable Care Act* or *Obamacare*. This Act of Congress attempted to reform the healthcare system by providing more Americans with quality health insurance coverage (see **Helpful Hint**).

HELPFUL HINT

It is important to stay informed on any changes to laws concerning health insurance.

It is also worth noting that the government is also involved in providing medical health insurance in three other important ways.

1. **Medicare** is available to those who are age 65 or older, those who are younger but have a disability, and those with end-stage renal disease. Most often, Medicare is used by retirees who no longer have access to employer-provided health insurance plans. Premiums for Medicare are based on the coverage selected.
2. **Medicaid** is state-administered health insurance designed to provide coverage for individuals and families with low incomes and limited financial assets. Eligibility and benefits vary considerably from state to state, but generally, a family must be living below or near the poverty threshold to qualify for Medicaid.
3. **State Children's Health Insurance** provides free or low-cost insurance for the children of working families with low to moderate incomes.

Health Insurance Costs

The cost to purchase health insurance is the *monthly premium* charged by your health insurance provider. Regardless of whether you need or use healthcare services, you must pay the premium throughout the year to keep your coverage active. However, having insurance does not mean you have free medical care. Although your costs will be less than if you do not have health insurance, you will generally still be responsible for at least one of the following expenses:

- Deductible.
- Coinsurance.
- Copayment.

To see how this works out in practice, let's consider an example. Imagine that one winter day your friend Jane slips on a patch of black ice and breaks her arm. Her arm requires minor surgery to help it heal properly. Fortunately, Jane has health insurance, with a $148 monthly premium. What other costs will Jane need to pay to have her arm fixed? Let's examine Jane's **out-of-pocket expenses**, which include her deductible, coinsurance, and copayment.

Deductibles

Jane's first out-of-pocket cost is her deductible. A **deductible** is the amount that the insured individual (Jane) must pay before the health insurance company will contribute any funds to pay medical bills. Keep in mind the following regarding deductible amounts:

- Deductibles vary across health insurance plans.
- Deductibles are cumulative amounts over a calendar year.
- Once the deductible has been paid, the health insurance plan will begin to pay for some of the remaining healthcare costs.

Assume that Jane's health insurance has a $500 deductible. This means that Jane is responsible for paying the first $500 of her medical expenses related to her arm injury. The deductible is a yearly expense, not a per accident expense. This may seem like a lot, but remember, without insurance Jane would be responsible for the entire expense.

Coinsurance

Nearly all health insurance plans require an insured to participate in medical cost sharing. This happens using either coinsurance or copayments (some health insurance plans require that an insured pay both a copayment and coinsurance). **Coinsurance** is the sharing of costs between the insured individual (Jane) and the health insurance company.

- Coinsurance is stated as a percentage of the claim.
- Common coinsurance rates are 80/20 and 90/10, which means that the insurance company will pay 80% (or 90%) of the remaining bill after the deductible has been met.

Say Jane's plan has an 80/20 coinsurance clause. This means that after paying the $500 deductible, she is responsible for 20% of the remaining bill. If Jane's coinsurance rate had been 90/10, she would have been responsible for 10% of all the medical bills after her deductible had been paid.

Copayments

Some insurance plans use a copayment rather than coinsurance. A **copayment** (or **copay**) is a flat fee (usually around $20 to $30 for a doctor's visit) that the insured individual must pay to receive any healthcare service. Let's say that Jane's copay for an emergency room visit is $250. This means that she must pay the $250 out of her own pocket. Unlike coinsurance, a copayment can be used to fund part of a deductible (remember, coinsurance is paid after a deductible has been met).

Out-of-Pocket Maximum

How much will Jane have to pay in total? You need to compute her out-of-pocket expenses to answer this question. Out-of-pocket expenses include the amount that an insured individual must pay, excluding the cost of premiums, for health care. If Jane's total bill for her broken arm and surgery is $14,800, then in addition to her monthly premiums, she will pay:

- A $500 deductible.
- A coinsurance of 20% of the remaining bill, which is $14,300. This comes to $2,860 [0.20 × ($14,800 − $500)].
- When added together, Jane's total out-of-pocket cost equals $3,360 ($500 + $2,860), which is significantly less than the total bill of $14,800.

Illustration 9.2.2 shows the breakdown of Jane's healthcare costs associated with her accident. Keep in mind that Jane's health insurance premiums of $148 per month are not included in this cost breakdown because the monthly premiums need to be paid regardless of whether Jane requires medical care.

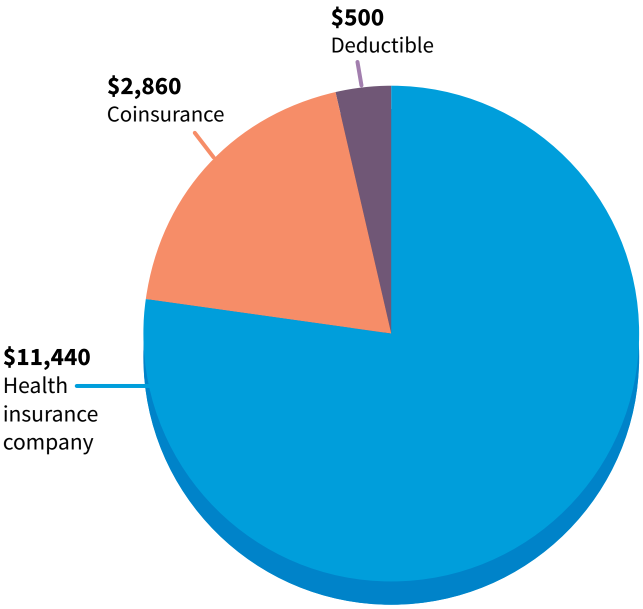


ILLUSTRATION 9.2.2

Breakdown of Jane's Healthcare Costs for Her Broken Arm

If Jane had experienced a more traumatic accident and needed to stay in the hospital for several days, her bill might be close to $100,000. This would greatly increase her out-of-pocket expenses. However, to protect individuals from potential catastrophic financial outcomes, the total amount of deductibles and coinsurance that an individual must pay is typically capped. This cap is referred to as the **out-of-pocket maximum**. Expenses above this cap are covered entirely by the health insurance company. For Jane, this means the following.

- Jane's health insurance has a $5,000 out-of-pocket maximum.
- With the costs for her broken arm, Jane only has $1,640 ($5,000 − $3,360) more coinsurance payments to make this year before she will reach her out-of-pocket maximum.
- Her health insurance will then cover 100% of the remaining expenses associated with this or any other medical bills for the calendar year (see **Helpful Hint**).

HELPFUL HINT

If Jane needs to see a doctor again, she will not have to pay a deductible because her annual deductible has already been met. However, she will still have to pay the copayment or coinsurance amount.

Concepts in Action

Levi is 26 years old and just started working full-time after graduation. He purchased health insurance through his employer. The health insurance policy has a deductible of $1,500, coinsurance of 20% (80/20), and a copay for emergency room visits of $250. Levi's policy has an out-of-pocket maximum of $8,000. Levi was recently base jumping with some friends when he ran into a problem. Fortunately, his parachute deployed (but later than expected), and he had a hard landing that broke his leg and ankle. Although Levi considered himself lucky, surgical pins were needed to repair the damage. The total healthcare cost of Levi's hard landing was $45,000. What portion of the cost is Levi responsible for, and what portion of the cost will be covered by his insurance?

Solution

If this is Levi's first health insurance claim or use of health insurance this year, Levi must pay his full deductible of $1,500. He will also need to pay his emergency room copay of $250. This leaves a remaining balance of $43,250 ($45,000 − $1,500 − $250). Levi's share of the coinsurance is $8,650 (43,250 × 20%), except that he has an out-of-pocket maximum expense of $8,000, so his share of the coinsurance is capped at $6,250 ($8,000 − $1,500 − $250). Levi has hit his out-of-pocket expense cap of

$8,000 for the year and therefore does not need to pay his full share of coinsurance. The insurance company will pay the remaining balance of $37,000.

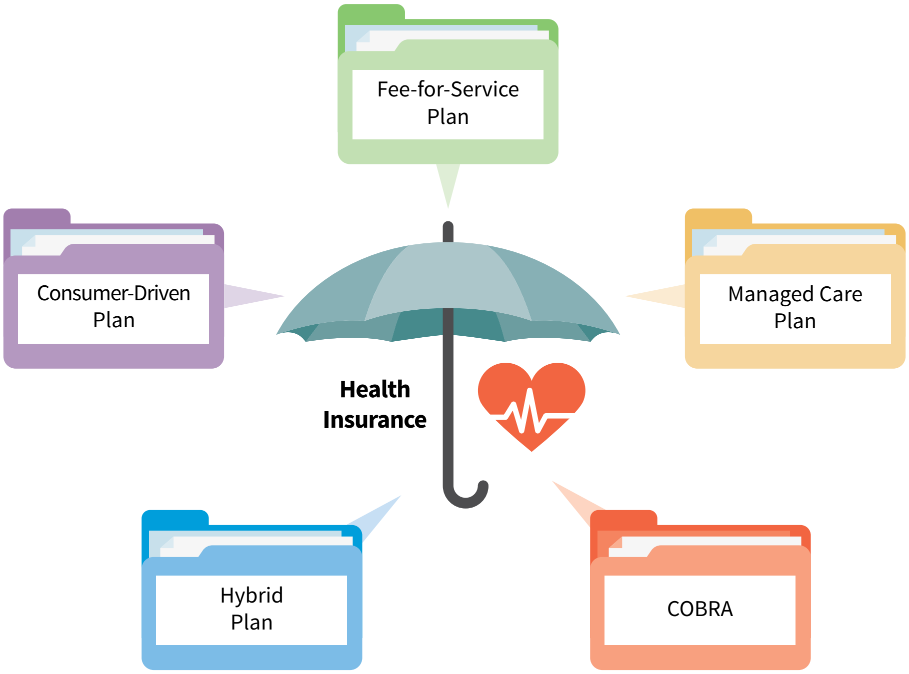
Additionally, if Levi has any more approved health insurance claims during the calendar year, the insurance company will cover the full cost of those claims because Levi has met his out-of-pocket maximum expenses. Hopefully, Levi was smart when he purchased his health insurance by establishing a health savings account (discussed later in this topic) and an emergency savings fund. In that way, he will have been setting money aside to help pay for the $8,000 in medical expenses.

Types of Health Insurance Policies

Health insurance plans can be classified as shown in **Illustration 9.2.3**. We describe each in more detail next.

ILLUSTRATION 9.2.3

Types of Health Insurance Plans



Fee-for-Service Plan

A **fee-for-service plan** is the most flexible, and costly, type of coverage available.

- Fee-for-service coverage allows the insured to use the services of different hospitals, clinics, and doctors without prior permission.
- A **preferred provider organization (PPO)** is a popular fee-for-service option.
- A PPO offers reduced deductibles, copayment, and coinsurance when someone visits a medical provider who belongs to an insurance network. If services are obtained outside the network, reimbursement amounts decrease.

Managed Care Plan

A **health maintenance organization (HMO)** is a popular form of **managed care**.

- An HMO provides medical care through a network of physicians and hospitals located in a specified geographic area.

- Rather than charge a large upfront deductible and ongoing coinsurance, services are charged using relatively small copayments per visit.
- The intent of an HMO is to coordinate healthcare services in a way that prevents rather than treats illness.

The primary advantages associated with using an HMO are lower premiums and reduced out-of-pocket expenses (see **Helpful Hint**).

An **exclusive provider organization (EPO)** is another type of managed care plan. EPO coverage typically only includes the use of doctors, specialists, clinics, and hospitals in the plan's network. Although there are a few exceptions for emergencies, EPOs tend to be restrictive.

HELPFUL HINT

Services provided outside an HMO network may not be covered in full. This means that out-of-pocket expenses can be very high.

Hybrid Plan

Hybrid plans combine elements of a fee-for-service and managed care plan.

- A popular hybrid coverage is called a **point of service (POS) plan**.
- If you have this type of plan, you will have lower out-of-pocket expenses if you use the services of network providers.
- To go outside the network, you must first receive a referral from a network provider to receive coverage.

Consumer-Driven Plan

A **consumer-driven plan** is a type of coverage designed to reduce yearly premiums by providing an incentive to the insured to pay more upfront medical expenses out of pocket. Although premiums are much lower than fee-for-service plans, out-of-pocket expenses will always be much higher.

- The most popular consumer-driven health plan is called a **high deductible health plan (HDHP)**.
- An HDHP has a relatively high minimum annual deductible: $1,350 in 2018 for an individual and $2,700 in 2018 for a family.
- The annual out-of-pocket amount (including deductibles and copayments) cannot exceed $6,650 (individually) or $13,300 (family) in 2018.

Individuals (and families) covered by HDHPs are also eligible to open a health savings account. A **health savings account (HSA)** allows you to save money on a pretax basis that can then be used to pay for qualified medical expenses, such as your deductible and other out-of-pocket expenses (see **Helpful Hint**). We discuss HSAs in more detail later in this topic.

If you decide to open an HDHP and an HSA, make sure that your account distributions are used for the following qualified medical expenses:

HELPFUL HINT

If you use the money from an HSA for qualified medical expenses, the distribution is also tax-free.

- Unreimbursed medical expenses, including deductibles and copayments.
- Long-term care insurance premiums.
- Health insurance premiums associated with a job termination.

COBRA

Although you may love your current job, there may come a time when you might lose your job or change employers for some reason. A big fear among those who are in the process of transitioning positions is the possibility of losing healthcare coverage. Fortunately, a federal law is in place to give most workers and their families who lose healthcare benefits the option to continue coverage for a limited period of time. This is called **COBRA**, which stands for the Consolidated Omnibus Budget Reconciliation Act. COBRA is available to anyone who works

for an employer with 20 or more employees. COBRA can even be used in cases when you have a reduction in hours worked or if a death, divorce, or other life event occurs in your family. Here is how COBRA works.

- If you elect to continue coverage, you may be required to pay the entire premium for coverage up to 102% of the cost to the plan.
- Coverage is typically only good for 18 months, but in some cases, you may continue on the plan for 36 months.

Obtaining Health Insurance

Although the Affordable Care Act is likely to undergo changes in the future, the Act has made purchasing health insurance an easy process. The following discussion highlights information about the Act and reviews the process you can follow to obtain insurance under the Act's rules.

HELPFUL HINT

Insurers cannot decline coverage for preexisting conditions under the Affordable Care Act.

- The Affordable Care Act requires that health insurance plans offer **minimum essential coverage (MEC)**, which is a comprehensive list of medical services and conditions that health insurance plans must cover (see **Helpful Hint**).
- Different health insurance plans now cover a standard set of medical services.
- Because health insurance plans must be compliant with MEC requirements, the remaining factors that differentiate health insurance plans are the monthly premiums and the network of doctors and hospitals that are covered by the insurance plan.
- If health insurance is purchased through the government website (these are called **health-insurance marketplace plans**), individuals may also qualify for an **Advanced Premium Tax Credit**, which is a subsidy from the federal government that helps lower the cost of health insurance.

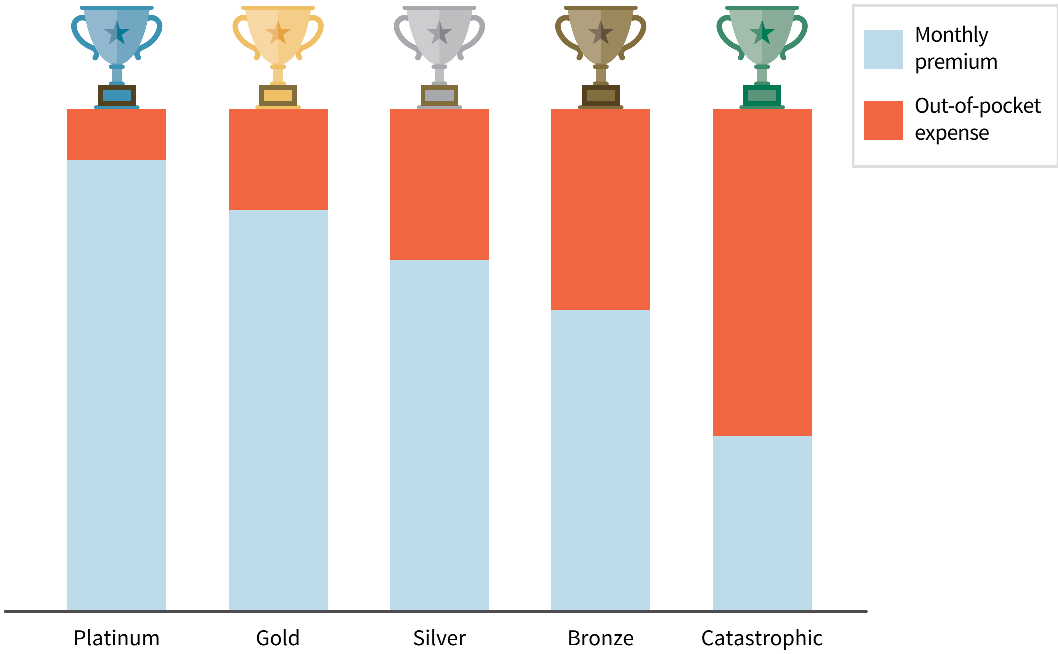
Let's take a closer look at these health-insurance marketplace plans.

Health-Insurance Marketplace Plans

When looking to purchase health insurance, there are several options available. How do you select the one that is best for you? Let's look at Susi's situation and follow the steps she took to select a health insurance policy.

1. Susi, a recent college graduate, went to the government healthcare website and found that the open enrollment period, a time when anyone can sign up for health insurance, had passed. However, Susi answered a few questions and found out that she could purchase health insurance immediately because of her circumstances.
2. Susi input her personal information and found many health insurance plans from which to choose. All the plans offered the same MEC, but each varied widely in monthly premiums and total out-of-pocket costs.
3. Susi saw that health insurance plans were grouped based on the amount of total healthcare expenses that each would pay. As shown in **Illustration 9.2.4**, she had access to four types of plans.
   - Platinum (low out-of-pocket maximum amounts, high monthly premiums).
   - Bronze (low monthly premiums, high out-of-pocket limits).
   - Silver and Gold (in-between Bronze and Platinum plans regarding the balance between monthly premiums and out-of-pocket expenses).
   - Catastrophic (for individuals younger than age 30, catastrophic plans are available with very high deductibles, e.g., $7,000, but low monthly premiums).

ILLUSTRATION 9.2.4 **Relationship Between Monthly Premiums and Out-of-Pocket Maximum Costs**



Source: Healthcare.gov.

Susi wanted a reasonable balance between monthly premiums and out-of-pocket limits, so she purchased a Silver plan. She also liked that this plan was classified as being eligible for a health savings account.

Health Savings Accounts

A health savings account (HSA) is a tax-advantaged savings account that can be set up to pay for out-of-pocket eligible healthcare expenses (see **Helpful Hint**).

- Any money that remains in the account can continue to grow on a tax-deferred basis and used anytime to pay medical expenses on a tax-free basis. If you use the money in the account for another purpose, you may pay a tax penalty of 20% and income taxes on the distribution.
- In 2018, you may contribute $3,450 to an HSA if you are single or $6,900 if you are married. Anyone older than age 55 may increase her or his contribution by $1,000 each year.
- Remember deductibles and copays? Those can be paid using a health savings account. Other allowed medical expenses include doctor prescriptions, doctor-prescribed medical devices, and other prescribed treatment.
- Anyone whose only health insurance coverage is through a high-deductible health plan (whether sold through the marketplace or purchased through an employer-provided plan) may establish an HSA.

HELPFUL HINT

The use of HSAs is limited to those with high-deductible health plans. Plans that qualify for HSAs are clearly designated.

In Susi's case, she liked the idea of an HSA because, if she needs money to pay for any of out-of-pocket medical expenses (e.g., deductibles, copays, coinsurance, prescriptions, and other doctor-prescribed treatments), she will have the funds available. Susi will be able to lower her taxable income while saving for her out-of-pocket expenses.

An HSA is a great financial tool to address both current and future goals. An emergency savings fund can also work well to cover any additional healthcare costs left uncovered by health insurance.

Flexible Spending Accounts

You may also be able to put money aside for out-of-pocket healthcare costs through a flexible spending account even if you don't have access to an HSA. A **flexible spending account**

(FSA) allows you to put money aside on a pretax basis each year. (Your employer may also contribute to your FSA.) Contributions to FSAs are limited to $2,650 per year per employee in 2018. Most plans allow you to use your FSA to pay for:

- Medical and dental expenses for yourself, spouse, and dependents.
- Deductibles and copayments (but not insurance premiums).
- Prescription medications, as well as over-the-counter medicines with a doctor's prescription.
- Insulin reimbursements without a prescription.
- Medical equipment, such as crutches, bandages, and diagnostic devices.
- Prescription eyeglasses and contact lenses.

HELPFUL HINT

If you have money in an FSA at the beginning of the new year or after the grace period, you will most likely lose it. Plan carefully and only put in the FSA what you know you will use.

Unlike an HSA, you must use your yearly contributions within the plan year, with two exceptions (see **Helpful Hint**):

- Your employer may provide a grace period of 2½ months to use the money in the FSA.
- Your employer may allow you to roll over up to $500 to the following year.

Cafeteria Plans

You may also be eligible for additional health and employee benefits through a cafeteria plan. A **cafeteria plan** is an IRS-approved plan maintained by your employer that provides employees with several tax benefits. If you have access to a cafeteria plan, you must be given access to at least one taxable benefit (such as cash) and one qualified benefit (such as an FSA). Here is a list of IRS-approved qualified benefits:

- Accident and health benefits (but not long-term care insurance).
- Adoption assistance.
- Dependent care assistance (used for help in paying for child and adult daycare).
- Group term-life insurance coverage.
- HSAs, including distributions to pay for long-term care services.

If you have access to a cafeteria plan, you should seriously consider participating. These plans provide valuable benefits and the ability to put money aside on a tax-deferred basis.

End-of-Topic Assessment

Multiple-Choice Questions

1. All the following statements are true about health risks, *except*:

a. health risks can be unpredictable.

b. health risks are uncommon for young people.

c. health risks can be quite unexpected.

d. health risks can be catastrophic.

2. For young adults, average health expenses are minimal but they may include:

a. visiting a doctor because of an injury.

b. going to a hospital emergency room because of an accident.

c. obtaining a prescription for medicine.

d. visiting a doctor because of an injury, going to a hospital emergency room because of an accident, or obtaining a prescription for medicine.

3. The Patient Protection and Affordable Care Act of 2010 is sometimes called:

I. Obamacare.

II. The U.S. Health Care System.

III. The Affordable Care Act.

a. I only.

b. I and III only.

c. II and III only.

d. I, II, and III.

4. A government-supported health insurance program that is designed to provide coverage to those currently living in poverty is called:

a. Medicaid.

b. Medicare.

c. Obamacare.

d. the Affordable Care Act.

5. Coinsurance is the sharing of costs between the individual and the health insurance company. Which of the following statements are also *true* about coinsurance?

I. The maximum amount an individual must pay is called the out-of-pocket maximum.

II. Common coinsurance rates are 80/20.

III. The total coinsurance paid by an individual is capped.

IV. Coinsurance is sometimes called a copay or copayment.

a. II, III, and IV.

b. I, III, and IV.

c. I, II, and IV.

d. I, II, and III.

6. Which of the following statements is *true* about health insurance?

a. An insurance copay is the maximum amount the insured individual is subject to pay.

b. A common insurance deductible is 80/20.

c. An insurance copayment is a percentage fee an insured individual must pay to receive healthcare services.

d. An insurance deductible is the amount that the insured individual must pay before the health insurance company will pay any money.

7. Which of the following statements is *true*?

a. Health care is free if you have health insurance.

b. Receiving healthcare services is more affordable if you have health insurance.

c. Coinsurance and copayments are waived in the event of a true medical emergency.

d. Individuals who purchase their health insurance through an employer are eligible for the Advanced Premium Tax Credit.

8. **Calculate** Domingo has a health insurance policy with the following provisions: $500 deductible, $50 copay, and 80/20 coinsurance provision. If Domingo has an accident that costs $3,000 in medical expenses, how much will he have to pay out of pocket?

a. $490.

b. $550.

c. $1,040.

d. $2,450.

9. A health savings account (HSA) is a tax-advantaged savings account that can be set up to pay out-of-pocket healthcare expenses. What else is *true* of HSAs?

a. HSAs are great tools for healthcare expenses and retirement goals.

b. HSAs are exactly like IRAs.

c. Distributions for out-of-pocket healthcare expenses are subject to income taxes.

d. Money in HSAs must be used for healthcare expenses.

10. Which of the following is *not* a qualified medical expense within a flexible spending account?

a. Prescription drugs.

b. Health insurance deductibles.

c. Dental expenses.

d. Long-term care premiums.

Adventures in Personal Finance

Short Answer

1. **Calculate** Logan fell off his skateboard and suffered injuries to his hands, forearms, and neck. Luckily, Logan has a health insurance plan with the following provisions: $1,000 deductible, $3,000 out-of-pocket maximum, and 10% coinsurance. If Logan goes to the emergency room and goes home with a total bill of $18,000, how much will the insurance pay? How much must Logan pay?

2. Jonny has been working ever since middle school and has established a weekly savings habit. He took his older sister's advice on starting his first job after college, and he decided to establish an HSA made available through his employer. He has been able to accumulate more than $15,000 over the past couple of years. How could Jonny benefit if he continues to accumulate money in his HSA and never uses his HSA funds for medical expenses?

3. Match each term in the left column with its definition from the right column.

a. Out-of-pocket expenses.
b. Health insurance.
c. Copayment.
d. Monthly premium.
e. Coinsurance.
f. Deductible.

1. The cost to purchase health insurance; the individual must pay this price to maintain access to health insurer's network of doctors and their prices.
2. The sharing of costs between the individual and the health insurance company.
3. A financial tool that allows the individual to transfer the unpredictable and potentially catastrophic costs of health care.
4. Generally, a flat fee the insured individual must pay to receive any healthcare services.
5. The total amount of money the insured individual must pay before the insurer pays for all remaining costs.
6. The amount that the insured individual must pay before the health insurance company will pay any expenses.

Explore

1. For most young people, a health crisis is something rarely considered. Think about situations you or your friends have encountered and list some situations where health insurance would have been appropriate.

2. **Calculate** James plays rugby every weekend. During a scrum, James got tangled up awkwardly, fell, and then felt excruciating pain in his rib cage. After everyone separated, it was clear that James suffered multiple compound fractures. Rushed to the nearest hospital by his teammates, James had to undergo emergency surgery to reset the bones and ensure neither of his lungs got punctured. Luckily, James had health insurance. James's health insurance plan had a $162 monthly premium, a $500 deductible, and a $2,500 out-of-pocket maximum. James's copay for emergency room visits was $250 and his coinsurance rate was 80/20, so he paid 20% of the bills after his deductible and copays had been paid. If James's total bill came to $17,550, detail his portion of payments necessary to settle his hospital bill.

3. **Writing** Visit three to five insurance company websites that sell health insurance. Compare the different plans offered by each company. Write a brief review of the different plans and recommend the policy that you feel would be most appropriate for someone in your situation.

Expanded Learning Activity

Calculate **Writing** Insurance can be expensive. But uninsured medical expenses resulting from serious illness or injury can result in financial ruin. Before deciding what do regarding your health insurance options, check out the facts. Go online to the government healthcare website and find out how much health insurance (with and without the Advanced Premium Tax Credit) will cost each month. To do this, you will need to select a level of coverage (Platinum, Gold, Silver, and Bronze, or catastrophic coverage, which is typically only available to people younger than age 30). Rather than selecting a plan upfront, find out what the monthly premium is for each plan level. After checking the costs and available subsidies and considering the risks of going without health insurance, which plan would you choose for yourself? Write a one-page summary of your decision and key factors that led you to make this choice.

Disability Insurance: Protecting Your Income from Life's Unexpected Events

LO 9.3 Discuss the need for disability insurance and the key features of disability insurance policies.

Let's face it; many people avoid talking about death and disability. These subjects disturb some people so much that they fail to consider the possibility that something bad might happen to them in the future. However, the possibility of becoming disabled during your working life should be a primary concern (see **Helpful Hint**). Figuring out now how to deal with this possibility is one way to ensure that your financial journey does not get sidetracked. In this topic, we show you how purchasing disability insurance can be an effective way to manage this risk.

HELPFUL HINT

During your working-age years, the likelihood of becoming disabled is two to three times greater than the likelihood of dying before retirement.

Overview of Disability

Definition of Disability

Let's start with what exactly is meant by the term *disability*. According to the stringent definition used by the **Social Security Administration**, a **disability** is characterized by the following three requirements:

1. You cannot do the work you did before an accident or illness.
2. You cannot readjust your skills because of your medical condition.
3. Your disability has or is expected to last for at least one year or until death.

This is considered an **any occupation** disability definition. Qualifying as disabled using this definition is quite difficult. However, most insurance companies use a more lenient definition. For example, an **own occupation** definition means that you will be considered disabled if you are unable to perform the material and substantial duties of your own occupation (and do not make money doing something else).

For example, say you are a police officer who becomes injured during an arrest and are unable to physically meet the job requirements.

- Under Social Security rules, you would not qualify as disabled because you could adjust your skills to do something else, such as being a school teacher or police academy instructor.
- Under an own occupation definition, you would likely be considered disabled.

Today, it is more common for insurance companies to sell **modified-own occupation disability coverage**. A modified-own occupation insurance plan pays a benefit if you are unable to perform the material and substantial duties of your own occupation and cannot find another position in which you are suited by education, experience, or training. If you do find another position, your disability coverage will be reduced by the amount you earn in the new job.

The Odds of Disability

People generally significantly underestimate the likelihood that they could become disabled. Consider Terry, a healthy married man who is 35 years old. He does not smoke or engage in excessively risky activities. He does ride his bike to work on occasion. He and his wife live relatively modestly. Although Terry and his wife have considered the devastating effect Terry's death would have on their family, they have not really thought about disability. Let's see if Terry and his wife should be concerned about this possibility by considering the following questions:

1. What is the probability that Terry will die this year?
2. What is the probability that he will die before age 67?
3. What is the probability that Terry will become disabled this year?
4. What is the probability that he will become disabled before age 67?

HELPFUL HINT

Although not shown in Illustration 9.3.1, at no age does the probability of death ever exceed the probability of becoming disabled.

If you are like most people, you guessed that Terry is more likely to die than to become disabled. This response is likely because death is newsworthy, whereas a disability is often hidden and rarely discussed. As shown in **Illustration 9.3.1**, the fact is that Terry is significantly more likely to become disabled this year than he is to die (3.2% versus 2.0%). He also is much more likely to become disabled before age 67 than die (see **Helpful Hint**).

ILLUSTRATION 9.3.1

Probabilities of Death and Disability for Males Living in the United States in Any Given Year

Age	Probability of Death	Probability of Disability	Age	Probability of Death	Probability of Disability
20	0.10%	0.20%	**45**	3.20%	6.70%
25	0.70%	1.10%	**50**	4.20%	9.30%
30	1.40%	2.10%	**55**	5.60%	13.30%
35	2.00%	3.20%	**60**	6.80%	19.30%
40	2.50%	4.70%	**65**	7.90%	26.10%

Source: *Table A—Probability of Death and/or Disability for Illustrative Cases of Insured Workers*, Social Security Administration, Actuarial Note 2013.6.

Now let's consider the probabilities of death and disability before age 67 for a 20-year old.

- As you can see in **Illustration 9.3.2**, the odds of a 20-year old becoming disabled before age 67 are at least three times as high as they are for dying.
- The odds are slightly better for women, but the fact remains that disability is the more likely event.

ILLUSTRATION 9.3.2

Probabilities of Death and Disability During Working Years

	Death Before Age 67	Disability Before Age 67
20-year-old female	4.40%	26.40%
20-year-old male	8.50%	27.50%

Source: *Table D—Various Probabilities of Survival, Death, and Disability for Insured Workers Attaining Age 20 in 2013 (Born in 1993)*, Social Security Administration, Actuarial Note 2013.6.

The Costs of Disability

A disability can stop your progress toward financial goal achievement. The **National Association of Insurance Commissioners** recently noted the following:

- Fewer than 40% of Americans could pay their bills or meet expenses if they were to become disabled and not return to work.
- Worse still, only 44% of U.S. workers have any form of disability insurance coverage.

These are sobering facts and a good reason to protect yourself against the risk of becoming disabled. Before we move on, a word of caution is in order for those who believe Social Security will help them.

1. Recall that the Social Security definition of disability is very strict. This means it is hard to qualify.
2. Even if you do qualify, you may not receive benefits. To receive Social Security disability benefits, you must have earned 20 credits in the past 10 years. Credits are based on your total wages and self-employment income during the year.

3. You can receive up to 4 credits for every year worked. In 2018, you must have earned $1,320 in covered earnings to get one Social Security credit or $5,280 to obtain the maximum 4 credits for the year.
4. If you are younger than age 24, you may qualify if you have 6 credits earned in the past 3 years.

Given the probabilities shown in Illustrations 9.3.1 and 9.3.2, you should now be convinced that protecting yourself using disability insurance may be a worthwhile investment. At a minimum, disability insurance is something that will help protect your human capital and wealth during your lifetime financial journey.

Disability Insurance

When it comes time to purchase a disability insurance policy, most people buy insurance through their employer, but you can also buy coverage in the insurance marketplace.

Types of Disability Insurance

You typically have two choices when it comes to disability coverage:

1. A **short-term disability policy** will replace a portion of your salary for 3, 6, or 12 months. The longer the coverage period and the more income replaced, the higher the premium (see **Helpful Hint**).
2. A **long-term disability policy** usually kicks in after you cannot work for 6 to 12 months. Most policies extend from a few years up until age 65 (at age 65 you can then enroll in Medicare). Higher premiums are associated with increased incomes and duration of coverage.

HELPFUL HINT

The premium is the cost of the insurance policy. Nearly all premiums are paid monthly.

Further, when it comes time to purchase disability insurance, you should seek out own occupation or modified-own occupation insurance. As noted previously, these policies pay if you are unable to perform the material and substantial duties of your own occupation (and do not make money doing something else).

Recommended Amount of Disability Insurance

How much disability insurance do you need? If you have already established a 3- to 6-month emergency savings fund, then you probably do not need a short-term policy. Why? Because you can use your emergency savings to fund your short-term disability need. In most situations, long-term coverage is more important. Here is a simple rule to help you determine how much disability insurance you need.

- Take your current gross income and multiply this by 65%.
- For example, if you make $50,000 per year, you will need approximately $32,500 in long-term disability coverage ($50,000 × 65%).
- Because many long-term disability policies have a 6-month **elimination period**—the amount of time between the disability occurring and the insurance company paying the claim—you will need about $16,250 ($32,500 ÷ 2) in your emergency fund to cover short-term expenses. If you don't have this amount, you might consider purchasing a short-term disability policy.
- If you do have enough saved to cover the elimination period, you should shop for high-benefit, low-cost, long-term disability coverage.

When to Buy Disability Insurance

There are a lot of myths surrounding disability insurance. For example, some people assume that only older people should worry about buying disability insurance. This is wrong. In fact, for those who are working, age should never really factor into the decision to buy insurance. Instead, the need for disability insurance is driven primarily by income and wealth considerations.

- As shown in **Illustration 9.3.3**, as your wealth increases, your need for high-value disability coverage declines.
- The reason is that you can afford to self-insure (through your savings and investments) potential losses in income.

ILLUSTRATION 9.3.3

Factors Affecting the Need for Coverage

Need More Insurance	Need Less Insurance
High debt	Low debt
Modest assets	High net worth
One source of income	Multiple sources of income

As a result, for those who are just starting out on their lifetime financial journey, the need for disability coverage is going to be higher. With a probability close to 30% that a 20-year-old will become disabled before age 67, the need for income replacement insurance just makes sense.

Disability Insurance Costs

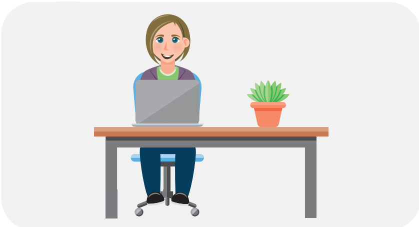
When it comes to insurance, you must always balance your need with your ability to afford premiums. You never want to be in a position where you are insurance-rich but cash-poor. This means that, although it is certainly prudent to reduce and transfer risk through insurance, you can sometimes have too much coverage or coverage that is too expensive. When this happens, you will have less cash available to allocate toward savings, investing, and other household expenses.

Determining Premium Costs

Although there are no absolute rules, you can benchmark the cost of a disability policy using the guidelines shown in **Illustration 9.3.4** (see **Helpful Hint**). For this example, assume you make $32,500 yearly.

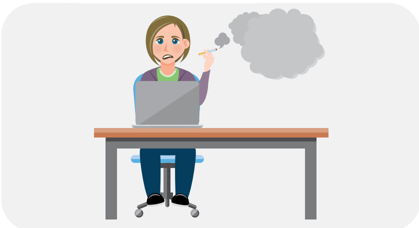
ILLUSTRATION 9.3.4

Approximate Annual Disability Premium Costs Associated with Different Health Situations and Occupations



If you are healthy and working in a low-risk occupation, multiply your insurance need by 1%.

= $325 per year



If you are unhealthy and working in a low-risk occupation, multiply your insurance need by 2%.

= $650 per year

If you are healthy and working in a high-risk occupation, multiply your insurance need by 3%.

= $975 per year

If you are unhealthy and working in a high-risk occupation, multiply your insurance need by 4%.

= $1,300 per year

HELPFUL HINT

Younger workers and those without a preexisting health condition will probably pay a bit less than others.

Concepts in Action

Janeen and Godwin have been married for 7 years. Janeen works as a corporate attorney. She currently earns $110,000 per year and has both short- and long-term disability coverage through her employer. Godwin works as a diesel mechanic. He earns $40,000 per year and has no disability insurance coverage. Both are in good health, and they have an emergency savings fund valued at $30,000 that is invested conservatively. After reviewing the odds for disability, Godwin realizes he needs to purchase a disability insurance policy. Help Janeen and Godwin determine the policy Godwin needs by answering the following questions.

1. How much income should Godwin plan to replace with a disability policy?
2. What type of policy should he purchase?
3. Does Godwin need short-term disability coverage?
4. Approximately how much will Janeen and Godwin pay in annual premiums for an appropriate policy? Assume that Godwin is in good health but that being a diesel mechanic is a high-risk occupation.

Solution

Godwin needs to replace $26,000 in annual income. This is based on multiplying his current income ($40,000) by 65%. He should purchase either an own occupation or a modified-own occupation policy. At this point in time, Godwin does not need a short-term disability policy. If he were to become disabled and unable to work, the couple would need $26,000 to meet household needs for a year, which they have in their emergency savings fund. Finally, Janeen and Godwin can expect to pay approximately $780 per year in annual premiums. This is based on multiplying $26,000 by 3%, which corresponds to the cost associated with a healthy person working in a high-risk occupation.

Adding on Essential Disability Insurance Riders

For you and many others, disability insurance may be offered by your employer as an employee benefit. It is usually a good idea to take advantage of employer-provided plans. Not only do these plans guarantee that you will be insured, but the annual premium will likely be less than what you will pay in the open market. However, there are two downsides associated with employer-provided coverage.

1. Should you leave employment, you will lose your coverage.
2. All benefits received in the case of disability will be fully taxable. If you purchase a private insurance policy and make a claim, the benefits will be received on a tax-free basis.

If you do decide to buy a policy directly from an insurance company, be sure it includes the following two options (riders) even if you end up paying a slightly higher premium. An **insurance rider** is an agreement added to a policy by the insurance company to expand or limit coverage (see **Helpful Hint**).

HELPFUL HINT

Adding riders to a policy will increase the annual premium.

1. A **guaranteed renewability provision** (or **non-cancellable clause**), which means the policy cannot be canceled by the insurance company, except for nonpayment of premiums. You also have the right to renew the policy in the future with the same benefits.
2. A **cost of living adjustment (COLA)**, which increases your disability benefits over time based on the Consumer Price Index.

Other riders include:

- **Return of premium:** Requires the insurance company to return all or a portion of your premiums if no claims are made for a specific period of time stated in the policy.

- **Partial disability rider:** Allows you to return to work part-time and receive partial benefits if you cannot work on a full-time basis as a result of your disability.
- **Residual disability rider:** Allows you to receive a benefit if you return to work full-time but your income is not fully restored. For example, if you are a police officer and you return to work full-time as a security guard, the residual benefit will pay the difference between your prior salary and your new salary.
- **Waiver of premium provision:** Allows you to stop paying premiums if you are disabled longer than a specific period of time, usually 90 days.

Workers' Compensation Insurance

One last thing is of importance regarding disability coverage. Sometimes people confuse disability protection with workers' compensation insurance. **Workers' compensation** provides benefits when you are injured or become ill as the result of work. Every state requires employers to pay into state-managed insurance pools to help pay claims made by injured employees. There is no direct cost of this coverage to workers.

How, then, does workers' compensation differ from disability insurance?

- Disability insurance provides coverage regardless of the cause of the disability.
- Generally, disability insurance is provided as a benefit or something that an employee will need to purchase.
- Workers' compensation, on the other hand, only pays benefits if you are hurt on the job; you must prove without a doubt that your disability was a function of your job.

A basic financial planning rule is this: never rely solely on workers' compensation insurance as a replacement for disability insurance.

End-of-Topic Assessment

Multiple-Choice Questions

1. According to the Social Security Administration, disability means:

- **a.** you are unable to do the work you did before your illness or accident.
- **b.** you are unable to do the work you did before your illness or accident and it is expected to last one year or longer.
- **c.** your disability must be expected to last one year or longer.
- **d.** your disability can be healed with long-term care services.

2. The Social Security Administration's definition of disability is most closely linked with the ______________ disability definition.

- **a.** any occupation
- **b.** own occupation
- **c.** modified-own occupation
- **d.** comprehensive occupation

3. At what age is the probability of death greater than the probability of becoming disabled?

- **a.** 40.
- **c.** 50.
- **b.** 60.
- **d.** At no age below 65 is the probability of death greater than the probability of becoming disabled.

4. Michelle and Jerry are each planning to apply for disability insurance coverage from a private insurance firm. Although Michelle and Jerry are the same age and have the same health profile, Michelle's premium is lower. What explains this phenomenon?

- **a.** Women are more likely to be involved in life-ending accidents compared to men.
- **b.** Men are more likely to become disabled.
- **c.** Women are less likely to die of natural causes.
- **d.** Men are less likely to become injured on the job.

5. How many credits must someone have with the Social Security Administration to be eligible to apply to receive Social Security disability benefits?

- **a.** None.
- **b.** 10 in the past 5 years.
- **c.** 20 in the last 10 years.
- **d.** 40 in the last 10 years.

6. A short-term disability insurance policy is designed to pay benefits for a maximum of ______________ months.

- **a.** 3
- **b.** 6
- **c.** 9
- **d.** 12

7. Who should consider purchasing a long-term disability policy with a maximum monthly benefit?

- **a.** Someone with a high net worth.
- **b.** Someone with high debt.
- **c.** Someone with low debt.
- **d.** Someone with multiple sources of income.

8. **Calculate** Barney applied for a long-term disability policy with a highly rated insurance company. His application was approved for $35,000 in annual benefits. What is the maximum amount he should expect to pay in annual premiums if he is healthy and working in a hazardous industry?

   a. $350. **c.** $1,050.
   b. $700. **d.** $1,150.

9. **Calculate** Your friend Pranav just graduated from medical school. He is excited to begin his new career but is worried about how he will be able to pay back his nearly $200,000 in student loans if he were to become disabled. You have recommended a long-term own occupation disability policy. Approximately how much will Pranav pay per month in premiums for this type of policy if the monthly benefit is $5,000? Pranav is a smoker but works in a low-risk occupation.

   a. $100. **c.** $200.
   b. $150. **d.** $675.

10. When buying a disability insurance policy, you should consider purchasing all the following riders, *except*:

    I. guaranteed renewable rider.
    II. inflation protection rider.
    III. workers' compensation rider.

    a. I only. **c.** I and II only.
    b. III only. **d.** II and III only.

Adventures in Personal Finance

Short Answer

1. What type of disability policy should you look for when purchasing a policy in the insurance marketplace? What type of policy should you avoid? Why?
2. Why does someone who follows the financial recommendations made throughout this text not require a short-term disability policy?
3. **Calculate** If Erin earns $49,000 per year and is in good health, how much does she need in disability insurance coverage?
4. Why is a cost of living adjustment (COLA) protection rider so important to include as part of a disability policy?
5. Assume that you learn that a relative was hurt skiing. The injury was serious enough that she could not return to work. In fact, it looks like she may be classified as partially disabled. Unfortunately, she does not have disability insurance. Will she be covered under her employer's workers' compensation plan?

Explore

1. The **Centers for Disease Control and Prevention (CDC)** compiles informative and sometimes startling statistics on the health of Americans. Visit the CDC website to learn more about the number of Americans currently experiencing trouble with hearing and vision. What kinds of preventative hearing and seeing measures can a young person take today to avoid becoming a CDC statistic in the future?
2. **Writing** Search **usa.gov** to obtain information about the physical fitness of the average American. For example, search for statistics on how many adults are unable to walk a quarter mile. Write a reaction paper based on your research. When writing, be sure to describe what you believe is the relationship between healthy behavior and the likelihood of becoming disabled.
3. Go to the **National Association of Insurance Commissioners** website and use its search function to download definitions for the following disability insurance terms. The definitions can be found under the topic "Consumer Alert":
   - Residual benefits disability insurance.
   - Waiting period disability insurance.
   - Waiver of premium disability insurance.
   - Inflation protection disability insurance.
   - Renewability disability insurance.

Use your definition research, combined with what is presented in this topic, to develop a disability recommendation for someone who is between 20 and 30 years of age, married, and earning $50,000 per year.

Expanded Learning Activity

Writing Disabilities can generally be classified into one of the following categories: (1) visual, (2) hearing, (3) ambulatory, (4) cognitive, (5) self-care, and (6) independent living. Go to the Disability Statistics page at the **Cornell University** website and then select *Prevalence* from the American Community Survey links. Use the *disability type* search function to track the percentage of people in your state who suffer from one or more of the disabilities listed. Write a brief report summarizing what you found. Be sure to describe any statistics that were surprising.

Life Insurance: Do You Really Need It?

LO 9.4 Describe the types of life insurance policies and how to develop a plan for optimal life insurance coverage.

Lyle and Jane have been friends for many years. While in college, tragedy struck both their families. Lyle had to drop out of school to help his mother meet her household expense needs. Jane stayed in school and eventually finished earning a degree in mechanical engineering. What was the difference between Lyle's path out of college and Jane's ability to stay in school? Life insurance. Both Lyle and Jane had a parent who died. Jane's parent had life insurance; Lyle's parent did not. As you'll learn in this topic, **life insurance** provides a tax-free, lump-sum insurance benefit that can be used to pay final expenses, burial costs, debts, and other expenses.

The Basics of Life Insurance

HELPFUL HINT

When you decide to purchase an insurance policy, you need to decide who owns the policy, who is the insured, and who will be the beneficiary.

Before jumping into the details of life insurance, you need to know the basics (see **Helpful Hint**). Essentially, there are three parties to a life insurance contract.

1. The **policy owner** is the person who makes premium payments. Recall that a *premium* represents the cost of insurance.
2. The **insured** is the person that must die for the policy to pay off (most often, the policy owner is the insured but not always). If you want to buy an insurance policy naming someone else as the insured, you must prove an insurable interest before purchasing the policy. An **insurable interest** means that if the insured individual were to die unexpectedly, the policy owner would suffer a financial loss. Family members, business partners, and employers typically can show an insurable interest.
3. The **beneficiary** is the person or entity that receives the policy death benefit when the insured dies. Policy owners may also list **contingent beneficiaries**. These individuals will receive the death benefit if the primary beneficiary dies before the policy owner. For example, a husband might own a policy and be the insured individual, with his wife as the beneficiary and his children as the contingent beneficiaries.

Although it is possible for the same person to be the owner, insured, and beneficiary, this rarely happens.

- Because the money provided to a beneficiary from a life insurance contract is received tax-free, it doesn't make financial sense for an insured person to be her or his own beneficiary.
- It's also possible for all three parties to be different, but this raises a red flag for insurance companies.
- For example, if a husband owns a policy on his wife but names another person as the insurance beneficiary, there is a significant incentive for the beneficiary to do harm to the insured.

As a result, it's generally best to have two of the three parties in a life insurance policy be the same person. Most often this means that the policy owner is also the insured individual, as shown in **Illustration 9.4.1**.

Types of Life Insurance

Although the process of life insurance may seem straightforward, the market for coverage is complex. There are two types of life insurance products to choose from, each of which offers several options.

1. Term-life insurance.
2. Cash-value life insurance.

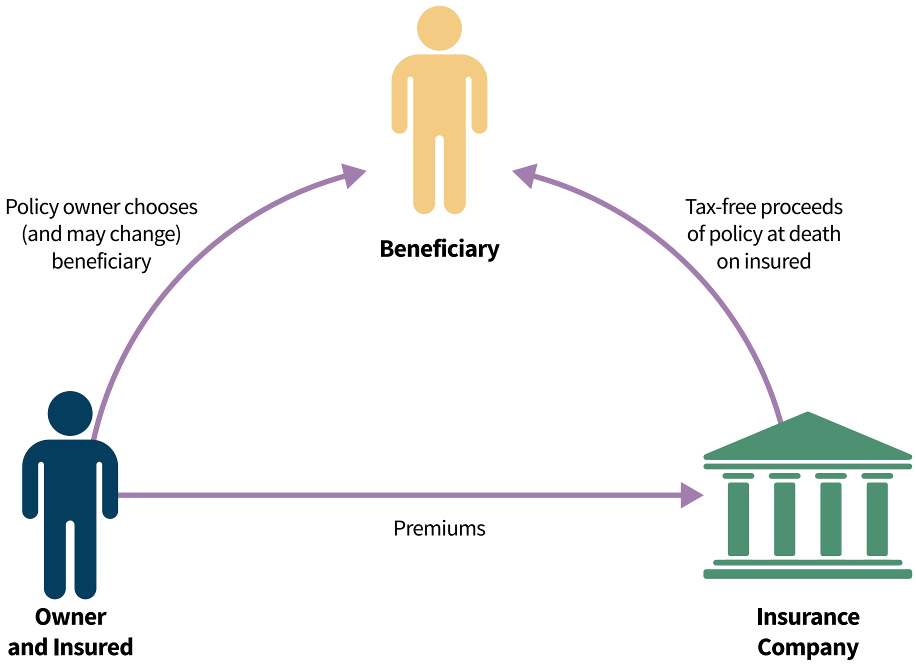


ILLUSTRATION 9.4.1

Three Parties to an Insurance Contract

Term-Life Insurance

Most consumer advocates recommend that you purchase term-life insurance unless you have a special need, such as a preexisting medical condition, a disabled child, or a complex family situation. **Term-life insurance** (also known as **pure term insurance**) provides only a death benefit if the insured individual dies before reaching a predetermined age (see **Helpful Hint**). If you buy term-life insurance, here's what to expect.

> **HELPFUL HINT**
>
> **Term-life insurance is usually recommended by consumer advocates because of its low cost, which allows a policy owner to buy ample coverage.**

- The death benefit will equal the **face value** of the policy, which is the initial dollar amount of insurance that you select (as the policy owner) to be paid to the beneficiary upon the insured's (most likely you) death. For example, you might buy a policy with a face value of $25,000, $100,000, or even $1,000,000 or more.
- As the name implies, your beneficiary only gets paid if you die within the "term" of the policy. A term can be as short as 1 year or as long as 30 or 40 years. An **annual renewable term** policy needs to be purchased yearly, whereas a **level term** policy is purchased for periods ranging from 5 to 30 or more years.
- Term insurance tends to be inexpensive, but you will need to qualify for the right to purchase insurance. This means that the insured—which could be you or someone else—must be in reasonably good health. The good news is that many employers provide term insurance as an employee benefit, in which case even those in poor health can still obtain insurance coverage.
- As you age, the cost of term insurance increases. For example, a 20-year $100,000 term policy for a healthy 30-year-old can be purchased for as little as $150 per year; the same policy for a 50-year-old might cost $600 per year.

In addition, three policy provisions, or **endorsements**, are worth adding to your policy. Remember, however, that adding these endorsements will increase the annual premium.

1. A **disability premium waiver** ensures that your policy premiums will be paid if you were to become disabled.
2. A **convertibility provision** allows you to convert to a cash-value policy (which we will describe later) in the future without having to provide proof of insurability. You might want to do this if your health worsens or you want to add a savings component to your insurance.

3. A **guaranteed renewability provision** permits you to extend your policy without having to take a medical exam. Of course, your premium will increase if you do renew, but at least you will have coverage.

Cash-Value Life Insurance

Although term-life insurance is generally recommended by consumer advocates—term insurance is inexpensive and flexible—there may be times in your life when you want insurance that is more permanent. When this happens, your second option is to purchase a cash-value life insurance policy. A **cash-value life insurance policy** is one that blends pure term insurance with a savings option (see **Helpful Hint**). Why might you prefer a cash-value policy? Well, the cash value grows on a tax-deferred basis. Also, you may borrow from the account without a credit check and, like all life insurance, benefits paid to your beneficiary are received on a tax-free basis.

HELPFUL HINT

Insurance agents sometimes call cash-value insurance permanent insurance.

Reasons to Use a Cash-Value Policy. A cash-value policy often appeals to individuals who need to force themselves to save money. Also, consider the following:

- It is possible to borrow the cash value without a credit check; a portion of the interest paid on the loan goes back into the insurance policy.
- It is also possible to cancel or surrender a policy and gain access to the unused portion of "cash" in the policy. However, you might owe taxes on the distribution if the amount taken from the account exceeds the premiums paid into the account.

These types of policies are widely used by business owners and others who need to shelter large sums of money in tax-advantaged accounts. Cash-value policies also provide lifetime coverage that can be used to pay for the needs of disabled family members in case the family breadwinner dies unexpectedly.

- A cash-value policy provides the ability to leave a generous sum to a charity or family members on a tax-free basis.
- A cash-value policy preserves insurability in case you become ill in the future.
- A cash-value policy provides estate liquidity for those with significant wealth.

Why Avoid Cash-Value Policies. A significant disadvantage of cash-value policies is that these policies cost much more than similar term policies. For example, a $100,000 guaranteed lifetime (to age 100) term policy might cost about $300 per year. The premium on a basic $100,000 cash-value policy, on the other hand, could be $2,000 to $5,000 yearly. Further, if you should cancel or surrender your policy before death, you may pay a substantial surrender penalty on any cash taken from the account. Most surrender penalties, however, disappear after 7 to 10 years.

Cash-Value Policy Options. With cash-value policies, a portion of each premium pays for term insurance. Also, these policies remain in force throughout your lifetime as long as premiums are paid. What is left goes into a "savings" account. You have four options here.

HELPFUL HINT

Whole and universal life insurance tend to appeal to risk-averse individuals.

1. **Whole life insurance**, in which you earn a fixed guaranteed rate of return.
2. **Universal life insurance**, which pays a higher return than whole life insurance on the cash-value portion of your policy. You also get the ability to skip premiums in the future and to adjust the face value of the policy (see **Helpful Hint**).
3. **Variable life insurance**, which allows you to invest in mutual funds with your savings.
4. **Variable universal life insurance**, which combines the best of variable and universal policies. This coverage allows you to invest in more risky investment products and retain the ability to skip future premium payments if the cash balance in the account is sufficiently large enough.

Illustration 9.4.2 provides a comparison of your life insurance choices.

ILLUSTRATION 9.4.2

Comparison of Term and Cash-Value Provisions

Policy Provisions	Term	Whole Life	Universal	Variable	Variable Universal
Guaranteed cash value	No	Yes	No	No	No
Guaranteed premium	Yes	Yes	No	Yes	No
Guaranteed death benefit	Yes	Yes	No*	Yes	No
Ability to skip premiums	No	No	Yes	No	Yes
Change the death benefit (face value)	No	No	Yes	No	Yes
Receive more than face value at death	No	No	Yes	No	Yes
Ability to make investments in the account	No	No	No	Yes	Yes

*The death benefit in a universal policy is not guaranteed because a policyholder may skip premium payments and use the cash value to meet policy expenses. Over time, the value of the policy can drop to zero.

Do You Need Life Insurance?

Now you know a bit about the different types of life insurance available in the marketplace. But you may be asking yourself, do I really need it? You should consider buying some coverage if you answer yes to any of the questions in **Illustration 9.4.3**.

ILLUSTRATION 9.4.3

Life Insurance Need Questions

Do You Need Life Insurance?

	Yes	No
1. Do you have a spouse or children?	☐	☐
2. Do you have debts that will need to be paid by someone else if you die prematurely?	☐	☐
3. Do you want to leave a legacy or inheritance to someone else?	☐	☐
4. Will your survivors need money to help pay for your funeral and burial expenses?	☐	☐
5. Do you expect your health status to deteriorate in the future?	☐	☐
6. Will you have large tax liabilities when you die?	☐	☐
You need insurance if you answered yes to any question!		

Keep in mind that even if you answered *no* to each question in Illustration 9.4.3, you should take advantage of purchasing insurance through your employer for the following reasons (see **Helpful Hint**):

- You cannot be denied because of a medical condition and premiums tend to be low.
- Your employer will sometimes provide a baseline level of coverage at no cost to you.

HELPFUL HINT

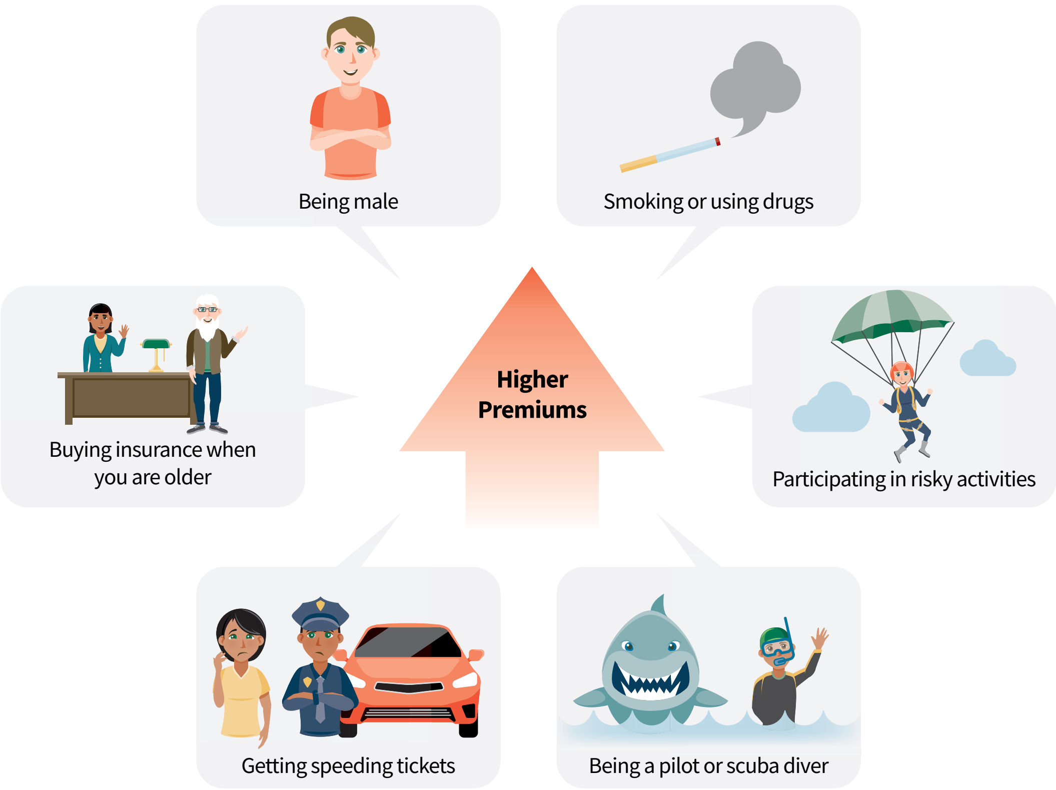
If you leave employment, however, you will likely lose your life insurance coverage.

Life Insurance Premiums

Recall that premiums are based on the face value of the policy and health factors of the insured individual. The greater the face value, the higher the premium. Similarly, more negative health factors experienced by the insured individual will also drive up the price of a policy. You might be surprised by some of the things that will cause your insurance premium to increase. **Illustration 9.4.4** shows six common premium escalators.

ILLUSTRATION 9.4.4

Characteristics and Behaviors That Increase Life Insurance Premiums



The factors shown in Illustration 9.4.4 typically trigger increased premiums because insurance companies figure that people fitting these descriptions tend to be a bit more reckless and less responsible. This means that these types of people are at a higher risk of dying sooner rather than later. In the insurance business, that is considered a bad risk.

How Much Life Insurance Do You Need?

Insurance companies are for-profit businesses. It is in their interest to sell you the most insurance possible. At the same time, it is in your interest to buy the right amount of coverage. Remember, you do not want to be insurance-rich but cash-poor. You need just enough insurance to meet your needs. It turns out that there are numerous ways to calculate an insurance need. Here are a few examples.

HELPFUL HINT

You can use an app to do these calculations.

- **Complex needs analyses**, which require calculating present values of future cash flows and adding together all current debts, bills, and liabilities. These calculations are the most accurate estimates of life insurance needs and are based on unique individual and family circumstances (see **Helpful Hint**).
- **Income multiplier estimation**, which is simply your current income multiplied by 10 and decreased by any current insurance you may currently have. For example, if you earn $35,000, you need about $350,000 in coverage. If you already have $150,000 in coverage

from your employer-provided life insurance, you need an additional $200,000 life insurance policy. It is that simple!

- **Human life value approach**, which is essentially a time value of money calculation. Here is the formula:

$$PVA = \frac{PMT}{i}\left[1 - \frac{1}{(1+i)^n}\right]$$

where

- *PVA* is the present value of an annuity.
- *PMT* is your current income.
- *i* is the current interest rate you can earn on investments.
- *n* is the estimated number of years your beneficiary will need income.

Using the previous example, let's say that you earn $35,000 and that a diversified investment portfolio can generate a 6% annual return. If your beneficiary will need income for 25 years, you should purchase an insurance policy with a face value of approximately $450,000, as the following calculation shows.

$$\$447{,}418 = \frac{\$35{,}000}{.06}\left[1 - \frac{1}{(1+.06)^{25}}\right]$$

You can also do this on your calculator by inputing 25 for N, 6 for I, 35,000 for PMT, and then computing PV.

Concepts in Action

Jimmy and Amanda recently got married. Both are working full-time with companies that provide good career advancement. Jimmy and Amanda have only a few classes to finish before they complete their undergraduate degrees. Both Jimmy and Amanda make approximately $35,000 per year, and they each have about $15,000 in federal student loan debt. Although they don't have any children right now, they hope to have a child soon after graduation. Jimmy and Amanda know that you are interested in personal finance, and they would like your help determining how much life insurance they need. What is your advice?

Solution

The simple solution is that currently Jimmy and Amanda do not need life insurance. Although it would be heartbreaking if either passed away unexpectedly, the surviving spouse would still have his or her own income. The student loan debt of the deceased spouse would be cancelled and would not need to be repaid. Currently, their focus should be on building an emergency fund, starting retirement savings, and saving for a down payment on a house.

However, when considering their future plans, the answer becomes a little more challenging. Because Amanda will likely be pregnant within the next couple of years and the couple will probably purchase a house in this time frame as well, it would be a good idea for each of them to purchase a term-life insurance policy. Using an income multiplier of 10, Jimmy and Amanda should each purchase $350,000 (10 × $35,000) of term coverage with themselves as the owner and insured and their spouse as the beneficiary. Getting Amanda's life insurance in place before she is pregnant is an excellent idea because many health changes can take place during pregnancy. They may be able to purchase term-life insurance through their employer. Or, if they are in excellent health, they could find a cheaper policy by contacting several life insurance brokers and obtaining competing bids.

End-of-Topic Assessment

Multiple-Choice Questions

1. The ________ receives the policy death benefit when the insured dies, whereas the ________ is the person who makes premium payments.
   - **a.** policy owner; beneficiary
   - **b.** beneficiary; policy owner
   - **c.** policy owner; policy owner
   - **d.** beneficiary; insured
2. Insurance policy owners can list contingent beneficiaries. Contingent beneficiaries:
   - **a.** will receive the death benefit if the primary beneficiary dies before the policy owner.
   - **b.** are usually family members, business partners, and employers that can show an insurable interest.
   - **c.** receive the policy death benefit when the insured dies.
   - **d.** most often are the policy owner and spouse, but not always.
3. Most consumer advocates recommend the purchase of:
   - **a.** term-life insurance.
   - **b.** variable universal life insurance.
   - **c.** universal life insurance.
   - **d.** whole life insurance.
4. Which of the following are forms of cash-value life insurance?
   - **a.** Variable universal life insurance.
   - **b.** Universal life insurance.
   - **c.** Variable life insurance.
   - **d.** Universal, variable, and variable universal.
5. Which of the following statements regarding cash-value life insurance is *incorrect*?
   - **a.** Costs much more than term policies.
   - **b.** Blends pure term insurance with a savings option.
   - **c.** Allows policy owners to borrow from the policy.
   - **d.** Only provides pure insurance against unexpected death.
6. Which of the following insurance products allows for investments in mutual funds and the possibility to skip future premium payments?
   - **a.** Variable universal life insurance.
   - **b.** Whole life insurance.
   - **c.** Universal life insurance.
   - **d.** Variable life insurance.
7. Under which of the following circumstances could you forego purchasing life insurance?
   - **I.** You have a spouse or children.
   - **II.** You are single with no dependents.
   - **III.** You have sufficient assets to pay all debts at your death.
   - **a.** I only.
   - **b.** I and III only.
   - **c.** II and III only.
   - **d.** I, II, and III.
8. Under which of the following circumstances may life insurance be unnecessary?
   - **a.** You have a spouse or children.
   - **b.** You want to leave a legacy or inheritance to someone else.
   - **c.** You will have a large tax liability (very wealthy) when you die.
   - **d.** You and your fiancee are getting married in 1 year and both of you work full-time.
9. There are numerous ways to calculate life insurance needs, among them:
   - **a.** taking a ballpark guess.
   - **b.** calculating present values of future cash flows.
   - **c.** letting group insurance decide.
   - **d.** multiplying current income by 2.
10. **Calculate** Using the income multiplier estimation method, how much life insurance would you need if your current income is $45,000?
    - **a.** $500,000.
    - **b.** $250,000.
    - **c.** $450,000.
    - **d.** $900,000.

Adventures in Personal Finance

Short Answer

1. Max heeded his dad's advice and purchased life insurance as soon as he moved from his parents' house. His insurance agent explained that life insurance could be a sound investment and that he could use it before he dies if he has a need for money. Or, Max could just buy a less expensive term-life policy and save the difference in policy premiums. About a year later, Max's computer was accidentally damaged, and Max needed a new one quickly. Under which scenario would it be easier for Max to access any savings to replace

his computer: (a) owning a cash-value policy or (b) owning a term policy and a savings account where he had been saving the difference in premiums?

2. Shannon just graduated from college and is starting a new job. She's taking advantage of an opportunity with a small start-up company that does not have any employee benefits. Shannon isn't too concerned about the lack of group insurance because she's not sure she even needs life insurance. Would you advise Shannon to obtain life insurance? If so, which type of life insurance is appropriate for her and why?

3. **Calculate** Jenny makes $45,000 working as an IT professional. She's established an adequate emergency fund, started to invest in mutual funds, and begun to accumulate money in her Roth IRA. Now she wants to make sure she has enough life insurance so that her family will continue to be supported after her death. She wants you, as her advisor, to estimate her life insurance needs using the income multiplier method. Based on that method, how much life insurance should she purchase?

Explore

1. **Writing** **Presentation** It is nearly impossible to obtain a cash-value life insurance premium quote online. The reason is that insurance companies sell these products through agents who earn a commission on the sale of these products. It is easier to obtain term insurance quotes online because insurance companies tend to sell directly to the public. Conduct an Internet search using a phrase such as "term life insurance quote." Answer each question honestly about yourself (but do not give your address, phone number, or other contact information). Request a quote on a $100,000 face value policy. Write a brief report detailing what happens to the cost of the policy when different lengths of time are used for the quote (e.g., 5, 10, 15, 20, and 30 years). Be sure to share the results of your research with others in class.

2. **Writing** **Presentation** Many personal finance media personalities, such as Clark Howard, Dave Ramsey, and Suze Orman, have strong opinions about life insurance and what type of policy consumers should purchase. Look up at least three personal finance media personalities of your choosing and find out their advice regarding life insurance. Write a paragraph discussing your findings and whether you agree with their recommendations. Share your findings with your class.

Expanded Learning Activity

Writing **Presentation** Think through your current life situation. Do you need life insurance? Who is dependent on your current income? Are there debts that others would have to pay if you were to die before those debts were repaid? For example, how much would your funeral and burial costs be? If you determine that you do have a need for life insurance, how much do you need? Next, what type of policy would you purchase? Summarize your current life insurance needs and policy choices (if applicable) in a one-page essay that you could share with the class.

Automobile Insurance

LO 9.5 Identify the need for automobile insurance and the key coverage elements to include as part of an automobile insurance policy.

A milestone is defined as an important point in someone's life, such as graduating from school, getting married, having children, being promoted at work, and retiring. In the United States, turning 16 (or 17 in some states) and obtaining a legal driver's license is also a milestone for many teenagers. A driver's license offers a degree of independence, but it also requires responsibility and an obligation to follow strict driving laws. One of the most important laws is making sure that the car you drive is insured in case you are involved in an accident. In this topic, we discuss the purpose and functions of automobile insurance.

Overview of Automobile Insurance

Personal Automobile Policy

A key element associated with owning and operating a vehicle is purchasing automobile insurance. For individual drivers, this type of insurance is commonly known as a **personal automobile policy (PAP)**.

- PAP coverage is extremely important when viewed from the context of your lifetime financial journey.
- You want to be able to cover any unexpected damages that might occur in the event of an accident.
- The less you must pay out of pocket for accidents, the more you can save for other goals and obligations.

HELPFUL HINT

A PAP pays (1) medical and property damage expenses to others harmed in an accident, and (2) repair costs for your vehicle if your policy extends beyond liability coverage.

A PAP provides insurance coverage in case of an accident. Although you might think of insurance as a tool to cover car repair costs as a result of an accident, this is not the primary reason you should buy a PAP. You are really buying insurance to pay any expenses (**liabilities**) to others in case you *cause* an accident. Rather than being a simple requirement to have insurance coverage for your vehicle, a PAP creates a safety net in case you are at fault in causing significant physical, bodily, or emotional harm to others (see **Helpful Hint**). A PAP also provides a safety net should you be in an accident caused by an uninsured or underinsured driver.

All 50 states, plus the District of Columbia, Puerto Rico, and other U.S. territories, require that every driver and vehicle owner have a PAP or some other proof of financial responsibility. There are some exceptions. In California, you may deposit $35,000 with the state Department of Motor Vehicles, post a bond, or provide other proof showing that you are self-insured. These situations are rare, so it is best to assume that you need PAP insurance coverage. Keep in mind the following automobile insurance facts:

HELPFUL HINT

Some policies only cover listed drivers, so it is important to check who is listed to drive your car.

- PAP insurance follows the car, not the driver. This means that if someone borrows your car and causes an accident, your coverage will be in full force (see **Helpful Hint**).
- By law, you must carry proof of insurance and present this evidence whenever you are pulled over by a law enforcement officer or involved in an accident. If you do not have insurance or you cannot prove that you are insured, you can lose your driver's license and your car may be impounded.

The average U.S. driver purchases a PAP based entirely on the premium of the policy. Although this is not the best way to make a PAP decision, it is a starting point in determining the coverage you should have in place. Recall that the *premium* is simply your cost of insurance.

Each state establishes minimum requirements for the level of insurance necessary to license a car in the state, but the cost of policies is determined by insurance companies.

Split Limit Requirements

Most states require that you purchase a **split limit PAP**. The term *split limit* refers to the functions of the policy: paying for medical and physical damage when you are at fault in an accident. **Illustration 9.5.1** shows recent data for each state's minimum level of insurance necessary to license a car in the state.

ILLUSTRATION 9.5.1

Minimum PAP Split Limit Coverage by State

Alaska 50/100/25	Louisiana 15/30/25	Ohio 12.5/25/7.5
Alabama 25/50/25	Maine 50/100/25	Oklahoma 25/50/25
Arkansas 25/50/25	Maryland 30/60/15	Oregon 25/50/20
Arizona 15/30/10	Massachusetts 20/40/5	Pennsylvania 15/30/5
California 15/30/5	Michigan 20/40/10	Rhode Island 25/50/25
Colorado 25/50/15	Minnesota 30/60/10	South Carolina 25/50/25
Connecticut 20/40/10	Mississippi 25/50/25	South Dakota 25/50/25
Delaware 15/30/10	Missouri 25/50/10	Tennessee 25/50/15
Florida 10/20/10	Montana 25/50/10	Texas 30/60/25
Georgia 25/50/25	Nebraska 25/50/25	Utah 25/65/15
Hawaii 20/40/10	New Hampshire 25/50/25	Virginia 25/50/20
Idaho 20/50/15	New Jersey 15/30/5	Vermont 25/50/10
Illinois 20/40/15	New Mexico 25/50/10	Washington 25/50/10
Indiana 25/50/10	Nevada 15/30/10	Wisconsin 50/100/55
Iowa 20/40/15	New York 25/50/10	West Virginia 20/40/10
Kansas 25/50/10	North Carolina 30/60/25	Wyoming 25/100/15
Kentucky 25/50/10	North Dakota 25/50/25	

Let's look at the state of Missouri as an example. Missouri's split limit requirements are 25/50/10, which refer to thousands of dollars ($25,000/$50,000/$10,000). Here is what these amounts mean:

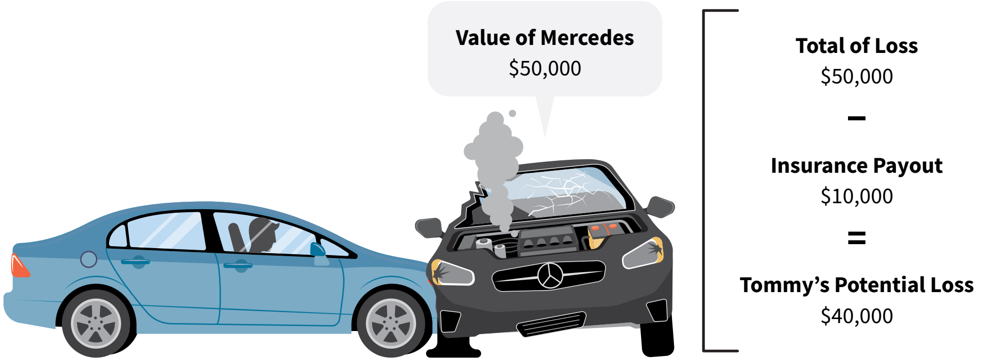
- The first number ($25,000) is the maximum amount that the insurance company will pay in medical expenses for someone other than you or your family if you cause an accident.
- The next number ($50,000) is how much, in total, your insurance company will pay for all medical expenses for others involved in the accident.
- The final number ($10,000) is the maximum amount the company will pay to repair someone else's property that you damage.

For example, if Tommy has a policy with 25/50/10 limits and he is involved in an accident that causes $9,000 worth of property damage to someone else, his insurance company will pay the claim. In this case, Tommy is fully covered because his policy will pay up to $10,000 in property damage. If Tommy is involved in an accident that causes $20,000 in damage to another person's car, he will be personally responsible for paying the extra $10,000!

If you are looking for the least expensive insurance, buying the state minimum split limit requirement will fit the bill. However, if you are concerned about protecting your wealth, then the minimum requirement is too low. Consider the situation shown in **Illustration 9.5.2**. If Tommy accidentally runs into a brand-new Mercedes and totals that car, Tommy will be liable for all costs except for the $10,000 insurance payout. Even more devestating would be if the passengers in the Mercedes were seriously injured, with all

ILLUSTRATION 9.5.2

Tommy's Potential Financial Liability for a Policy with 25/50/10 Limits



passengers requiring extended hospital stays. As a result, a minimum split limit coverage of 100/300/50 is often recommended. Your premium will be higher, but you will have substantially reduced your financial risk.

Other Factors Affecting PAP Premiums

In addition to specific PAP coverage, one of the primary determinants of a PAP premium is your driving record. Better drivers pay less. Worse drivers pay more. Doing any of the following usually, at a minimum, will trigger an increase in insurance premiums and possibly result in a cancelled policy:

- Being involved in accidents.
- Getting moving violation tickets.
- Committing manslaughter.
- Driving while under the influence of alcohol or drugs.
- Criminally negligent driving.
- Driving without a license.
- Driving without insurance.

HELPFUL HINT

Anything that affects your driving record will also affect your PAP premiums and, consequently, your financial situation.

Premiums are also based on other factors. Low credit scores are sometimes used to determine who will be classified as a high-risk driver. This means that if you manage your money well and pay your debts on time, you may get a break on your PAP premium (see **Helpful Hint**). **Illustration 9.5.3** highlights other factors that can affect the amount you will pay for a personal automobile policy. Although clearly some of these factors are out of your control, there are several that you can influence in your favor.

ILLUSTRATION 9.5.3

Other Factors That Influence PAP Premiums

Factor	Impact on Premium
Having a good driving record	Decreases premium
Having a high credit score	Decreases premium
Taking a defensive driving course	Decreases premium
Purchasing a PAP with the same company that insures your home and other assets	Decreases premium
Being a good student	Decreases premium
Being male	Increases premium
Being younger than age 25	Increases premium
Living in a city	Increases premium
Owning a luxury car	Increases premium
Using your car for commuting to school/work	Increases premium

Concepts in Action

Arnold and Paulette are friends. Arnold is 26 years old and lives in a small town. Paulette is 28 years old and lives in a large city. They both drive modestly priced cars that are 3 years old. Each has a PAP with 25/50/20 split limit coverage. Although both have a reasonably good driving record—neither has been involved in an accident—Paulette has received three speeding tickets over the past year. Arnold, on the other hand, has never received a ticket. Other differences between Arnold and Paulette include:

- Arnold took a defensive driving course 6 months ago.
- Paulette insures her car and apartment with the same company, whereas Arnold only has a PAP.
- Arnold's credit score is higher than Paulette's credit score.

Given this information, who is likely to pay more in PAP premiums on an annual basis? Why?

Solution

In this example, Arnold should pay less in PAP premiums on an annual basis. Although it is true that the premium paid by female drivers tends to be lower than the premium paid by male drivers, in this case, Arnold's overall situation indicates that his annual premium will be lower. Two negative factors work against Paulette. First, she has received speeding tickets recently. Second, her credit score is lower than Arnold's score. Several factors benefit Arnold. For example, the fact that he took a defensive driving course will help reduce his PAP premium, as will his recent good driving record.

Liability Coverage

It may be hard to believe, but there are a few drivers on the road who either do not have insurance or carry too little insurance; they are **underinsured**, which means their PAP is not enough to pay a claim if they damage someone else's property.

- Remember, the primary reason you need a PAP is to protect yourself and your financial future in case you cause damage to others.
- **Liability coverage** is intended to pay for medical costs, funeral expenses, lost wages, punitive damages, car rentals, repairs, and compensation for pain and suffering for people in the other car involved in an accident.
- You usually do not need to pay the policy deductible for a liability claim.

In this section, we discuss other types of coverage you need to avoid being underinsured.

Collision Coverage

If you happen to damage your own car, **collision insurance** will pay for your car's repairs (your personal health insurance will cover any medical expenses). Collision coverage:

- Insures you, your family, passengers, and others who drive your car with permission.
- Requires that you pay the policy deductible when you make a claim.
- If claimed, pays you for the actual cash value of the repair or value of the car, minus the deductible.

You want to be careful making any claims against your policy. Those with more frequent claims tend to pay higher premiums (see **Helpful Hint**).

HELPFUL HINT

If you own a car older than 7 years, you may want to drop collision coverage because the payment of ongoing premiums may be more than the value of the car.

Comprehensive Coverage

Comprehensive insurance is an optional coverage that helps pay for damage to your vehicle caused by a nonaccident event. Typical events that trigger comprehensive claims are:

- Hail storms.
- Broken windshields.
- Vandalism.

Comprehensive coverage has a deductible, usually around $1,000, that is different from the PAP itself.

As with other elements within a PAP, you should be cautious when filing claims. The more claims, the higher your premium. In some cases, you may be dropped by your insurance company if you file too many claims.

HELPFUL HINT

If you loan your car to a friend on a regular basis and that person causes an accident, your insurance company may contest the claim. Anyone who is a regular driver of your car must be listed on the insurance policy for you to be fully insured.

Making a Claim

Illustration 9.5.4 summarizes your options when filing a PAP claim under three scenarios (see **Helpful Hint**).

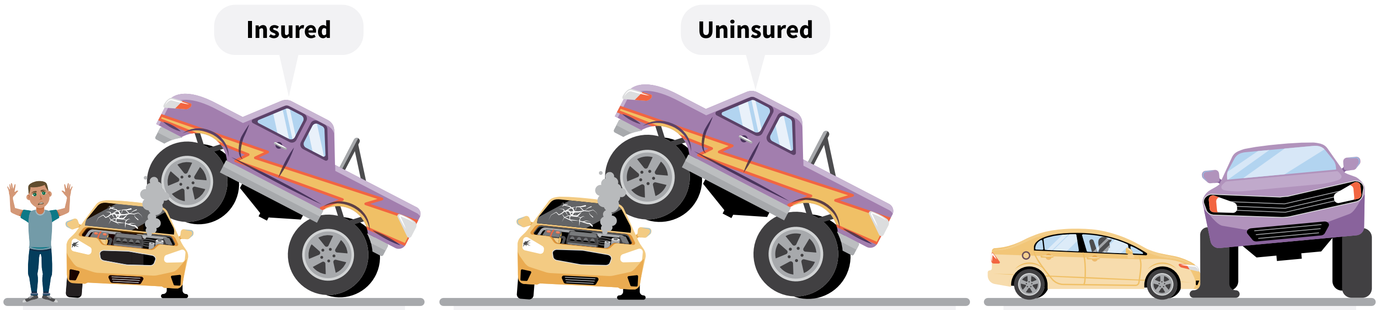
1. When you are not at fault in an accident.
2. When you are not at fault in an accident, but the other driver is underinsured.
3. When you are at fault in an accident.

Notice that you are only required to pay your PAP deductible, in most situations, when you make a claim against your own collision or comprehensive coverage.

Uninsured Motorist and Gap Coverage

As a consumer, you are always balancing premiums paid with having appropriate coverage. It is best to purchase the maximum liability coverage your budget will allow. You should also consider adding **uninsured/underinsured motorist coverage**.

ILLUSTRATION 9.5.4 **What Happens When You File a Claim?**



Not at Fault

- Claim against other driver's insurance; no deductible.
- Claim against own collision coverage; pay deductible (may petition other driver's insurance company to reimburse the deductible).

Not at Fault but Other Driver Uninsured

- Claim against other driver's insurance and no deductible.
- Claim against own collision coverage for remainder of expense, pay deductible (may sue other driver in civil court for the deductible).
- Claim against own collision coverage; pay deductible (may petition other driver's insurance company to reimburse the deductible).
- If you have uninsured or underinsured coverage; you will generally pay a small deductible.

At Fault

- No deductible for liability coverage claims made by other driver.
- Claim against own collision coverage to fix your car; pay deductible.

- This additional coverage will pay your medical and property damage expenses above what someone else's policy pays.
- If someone drives without automobile insurance and causes you to be in an accident, you will then be responsible for paying your own expenses.
- Although it is true that you can take someone to court, and likely win a judgement, uninsured/underinsured motorists typically don't have the means to pay a verdict. It can also be very expensive and difficult to take someone to court.

As such, this coverage is needed, but it will increase your premium.

Gap coverage is another option that you may want to include in your policy. As shown in **Illustration 9.5.5**, a gap policy insures you for the "gap" between what you owe on your car and what the car is worth. This is especially important if your vehicle is damaged beyond repair. When an insurance company considers your car "totaled," you only get paid the current market value, not what you owe. Gap insurance covers the difference.

ILLUSTRATION 9.5.5

The Purpose of Gap Insurance

Amount owed	$25,000
− Current market value	21,000
= The "gap"	$ 4,000

If you are just learning about automobile insurance, the terms and phrases used by insurance agents can get complicated. **Illustration 9.5.6** provides a summary of the definitions and insurance concepts discussed so far.

ILLUSTRATION 9.5.6

Personal Automobile Policy Definitions

Insurance Term	Definition	Insurance Takeaways
Premium	The cost of insurance.	Premiums vary by location, insurance company, and driver.
Deductible	Amount you must pay before the insurance company makes a payment on a claim.	The higher the deductible, the lower the premium.
Liability coverage	Amount your insurance company will pay someone else if you are responsible for an accident. Your liability coverage is represented by the amount of your split limit coverage.	The higher the liability coverage, the higher the insurance premium.
Collision coverage	Amount your insurance company will pay for damages to your car, regardless of who is at fault in an accident.	Collision is an optional coverage that will increase the premium.
Comprehensive (other than collision) coverage	Amount paid to you if your car is stolen or damaged by fire, vandalism, hail, falling objects, or something other than a collision. Payment is made based on actual cash value minus your deductible.	Comprehensive coverage is optional; making many claims against your comprehensive coverage will increase the premium paid in the future.
Gap insurance	This optional coverage insures you for the "gap" between what you owe on your car and what the car is worth.	When an insurance company "totals" your car, you only get paid the value, not what you owe. Gap insurance covers the difference.

Source: Definitions adapted from Texas Department of Insurance, *Glossary of Common Insurance Terms*.

Car Accidents: What to Do and Not Do

Oops, you were just in a car accident. What do you do? Although no one ever wants to be in this situation, it is a good idea to have a sense of what you should do, and not do, if an accident happens to you.

What to Do

Here is what the attorneys at the State Bar of California say you should do if you are involved in an accident.

- **Stop your car immediately.** Determine what the damage is and then move your car out of traffic if possible. If you were to drive away, regardless if you hit a moving or parked car, someone's property, or a pedestrian, the police could charge you with a *hit and run*, which is a serious offense. If you hit a parked car or someone's property, you are required to attempt to find the owner. This is not always possible, so the law states that you must leave a note with your name and contact information for the property owner in a conspicuous place on the other person's property.
- **If someone is injured, call 911 right away.**
- **Exchange the following information with the other driver:**
    - Name, address, date of birth, telephone number, driver's license number and expiration date, and the insurance company name (with policy number).
    - The make, year, model, license plate number, and if possible the vehicle identification number of the other car.
    - If the other driver does not own the car—a typical situation with high school and college students—make sure to write down (or take a picture of) the car owner's information (this information is on the car's registration form).
    - The names, addresses, birth dates, telephone numbers, and driver's license numbers of all passengers in the other driver's car.
    - The names, addresses, and telephone numbers of any witnesses to the accident. Even if witnesses will not give you their name and phone number, write down (or take a picture of) their car and license plate number. Your attorney will want to know who was at the scene of the accident (just in case you go to court).
    - The name and badge number of the law officer who helps at the scene. Note that each state has its own laws regarding the dispatch of law enforcement to the scene of an accident. Some states will only dispatch an officer if there is a personal injury. Other states require that law enforcement be notified if any accident results in significant damage, say, $500. Be sure to ask the officer where you may obtain a copy of the accident report.
- **Draw a simple diagram of the accident.** You should also **take plenty of pictures** with your phone or camera of all of the vehicles involved and, if possible, the other drivers' licenses. It also helps to jot down notes about the weather, traffic, and road conditions.

The main point to remember is to try to stay calm and focused. Being in an accident can be a scary experience, but obtaining the most information possible right after an accident happens can make a significant difference later.

What *Not* to Do

Let's now talk about what *not* to do. Again, according to the State Bar of California:

- Never (ever) volunteer information about who might be to blame for the accident, even if you suspect that it was your fault. Call your insurance agent or company first before admitting to anything or agreeing to pay for damages.

- Do not sign anything at the scene of an accident other than a ticket from a law enforcement officer. Signing a ticket is not an indication of guilt; it just means that you agree to appear in court.
- Always report the accident to police, even if the other driver does not want to.

You want to be cautious after an accident because it can affect how much you will pay in insurance premiums going forward.

End-of-Topic Assessment

Multiple-Choice Questions

1. The primary reason you should purchase PAP coverage is to:

- **a.** pay for damage to your vehicle if you are involved in an accident.
- **b.** pay for the liability you may cause to others if you are involved in an accident in which you are at fault.
- **c.** pay for your medical expenses if you are involved in an accident.
- **d.** pay for damage to your vehicle, medical expenses for yourself, or damages and medical bills you cause for others.

2. PAP coverage follows the ______________ not the ______________.

- **a.** car; driver
- **b.** driver; car
- **c.** insured; car
- **d.** driver; passenger

3. Bonnie regularly lets her boyfriend drive her car whenever they go on a date. Yesterday, he caused an accident driving Bonnie's car. Will Bonnie's insurance company cover the accident?

- **a.** Yes, because PAP coverage follows the car.
- **b.** No, because her insurance company will claim that the boyfriend should have been listed as a regular driver of the car.
- **c.** No, because insurance is always waived when a car is used by a unlisted driver.
- **d.** Yes, because Bonnie was present when the accident happened.

4. The 50 in a 50/100/25 split limit policy refers to the maximum amount the policy will pay in:

- **a.** property damage.
- **b.** medical coverage for those in your car.
- **c.** medical coverage for everyone in the other car.
- **d.** medical coverage for one person in the other car.

Use the following information for Questions 5–8.

George was in an automobile accident. According to the police report, he was responsible for causing the wreck. The accident was large enough to close down the interstate for an hour. The three people in the other car were rushed to the hospital. The costs associated with the rescue and medical care were $18,000 for each person.

5. **Calculate** If George's PAP split limit coverage was 25/50/25, how much will the insurance company pay, in total, for the medical treatment for those in the other car?

- **a.** $18,000.
- **b.** $25,000.
- **c.** $50,000.
- **d.** $54,000.

6. **Calculate** How much will George's insurance company pay if George caused $75,000 in damage to the other driver's property?

- **a.** $0.
- **b.** $25,000.
- **c.** $50,000.
- **d.** $75,000.

7. George is considered to be a(n):

- **a.** uninsured motorist.
- **b.** underinsured motorist.
- **c.** victim of a hit and run.
- **d.** felon.

8. Based on the facts of the case, which of the following statements is *true*?

- **I.** George can expect his PAP premiums to increase in the future.
- **II.** George will be personally liable for any excess damages not covered by insurance.
- **III.** George's future liability will be exempt if he can prove that he was covered at the state insurance minimum level.

  - **a.** I only.
  - **b.** III only.
  - **c.** I and II only.
  - **d.** I and III only.

9. **Calculate** Melba was involved in an automobile accident. She was found liable for $20,000 in property damages. Fortunately, she had PAP coverage with a split limit of 25/50/20, a deductible of $500, and a comprehensive deductible of $100. How much will her out-of-pocket expense be for the accident?

- **a.** $0.
- **b.** $100.
- **c.** $500.
- **d.** $600.

10. Which of the following is an optional coverage within a typical PAP?

- **a.** Comprehensive coverage.
- **b.** Underinsured coverage.
- **c.** Liability coverage.
- **d.** Both comprehensive and underinsured coverage.

Adventures in Personal Finance

Short Answer

1. Automobile insurance companies will check your insurance claim history, your credit history and report, and your driving history whenever you apply for insurance or renew a policy. Someone who is classified as a high-risk driver can pay up to 60% more for coverage. What factors do you think contribute to someone being categorized as a high-risk driver?
2. What will happen if Nigel drives with a split limit coverage of 10/20/10 and causes a wreck that totals the other driver's car that is worth $30,000?
3. Why should you drop comprehensive coverage on a car that is older than 7 years? When would this rule not apply?
4. Why should you never admit guilt at the scene of an automobile accident?

Explore

1. **Writing** **Groupwork** Visit the website of your state's **Department of Motor Vehicles** or similar agency to determine the exact rules and regulations you must follow if you are involved in an automobile accident. Summarize your findings in a brief paper. Compare your notes with others in class.
2. **Presentation** Conduct an Internet search to identify 10 cars that are the least expensive to insure. Briefly summarize the characteristics of these vehicles, focusing on why the premiums tend to be lower for the cars on your list. Share the results of your research with others in class.
3. Contact your automobile insurance agent (or locate an agent if you do not drive). Ask her or him about policy coverage when you rent a car or whether there are restrictions that will limit coverage. Also, ask the agent what coverage you should purchase from the rental car company.
4. Look into your own personal automobile policy. Based on what you read in this topic, are you adequately insured or are you underinsured? What steps should you take to align your coverage with your needs?

Expanded Learning Activity

Writing If you watch any amount of television, you will notice advertisements from automobile insurance companies claiming to offer the best PAP coverage. Nearly every insurer claims the ability to cut the average insurance premium of drivers by hundreds of dollars. Take some time to test which insurer actually provides the best combination of coverage with low premiums. Identify at least four insurance companies and obtain a quote for the following PAP features:

- Split limit coverage: 50/100/25.
- Deductible: $500.
- Comprehensive deductible: $1,000.
- Uninsured/underinsured coverage: $25,000.

Write a brief summary of your findings. Be sure to indicate which insurance company you would recommend based on your research.

Homeowner's and Renter's Insurance: Protecting Your Personal Belongings

LO 9.6 Describe the benefits of insurance to protect the personal and real property of homeowners and renters.

You already know this, but it is worth repeating: the world is a risky place. You are surrounded by perils and hazards every day. A **peril** is anything that causes you to experience a loss. A **hazard**, on the other hand, is a situation or condition that increases the probability of a peril occurring. For example, a hurricane is a peril. Living in coastal areas in the southeastern United States is a hazard. Why? Because living in a state like Florida makes it more likely that someone will experience a loss from a hurricane.

When it comes to determining where to live, everyone needs to answer an important question: Do the benefits of living in a location compensate for the risks associated with the decision? People living in Florida, for example, need to determine if sunny weather and beach access compensate for the higher risk associated with hurricanes. Those who live in the mountains need to weigh the location's benefits against the risks of fire and snow damage. In this topic, we discuss how insurance can help you manage the risks resulting from where you live, whether you own or rent. As you will see, homeowner's and renter's insurance are tools that can help you stay on track during your lifetime financial journey.

Insurance and Risks

Perils

Think about where you are living right now. Regardless of whether you rent or own your residence, you probably have items that are valuable to you, including furniture and treasured photos and memorabilia. All these items represent your property. Now consider what could happen that would result in the loss of your property.

- A fire could destroy your house or apartment.
- A hail storm could move through and destroy your roof, thereby damaging all the contents within.
- A pipe could burst and cause a flood.
- A thief could break in and steal your belongings.

These are examples of perils. Although there is a good chance that these perils may never happen to you, you should protect yourself against possible losses by purchasing insurance. Homeowner's and renter's insurance are widely available and generally quite reasonably priced (we will talk about these forms of insurance in more detail later).

Hazards

Although you may be interested in protecting yourself from perils, insurance companies tend to be more interested in reducing hazards. Recall that hazards reflect the probability of a peril occurring, such as the greater likelihood of a hurricane causing damage for those living in Florida rather than in Utah. **Illustration 9.6.1** shows the association between perils and hazards. As hazards increase, the likelihood of a risk occurring increases. The costs associated with covering these risks also increase when hazards are high.

Although there are all types of hazards, some cause insurance companies more concern. Insurance companies are primarily troubled with two types of hazards when dealing with policyholders.

ILLUSTRATION 9.6.1

The Relationship between Perils and Hazards

1. A **morale hazard**, which is basically a careless attitude on the part of an insured policyholder. Homeowners and renters sometimes become complacent or careless because they have insurance. They might not keep their house tidy, or they may act recklessly in and around their property. Insurance companies constantly look for ways to stop people from thinking that "insurance will pay for it." Some companies run television advertisements promoting home safety, whereas other companies provide discounts for good behavior, such as installing alarms and cameras in a home.
2. **Moral hazards**, such as dishonesty, cheating, and filing false insurance claims.

Perils and hazards are at the heart of any insurance purchase you make. When morale and moral hazards increase, the cost of insurance also goes up. This is the reason it makes financial sense to purchase insurance and then behave like you don't have it. In other words, be cautious, take care of your property, and never file a false claim.

Insurance Purchase Considerations

HELPFUL HINT

When you buy a house, the lender will require proof of insurance, sometimes dictating specific coverage.

There are three factors to consider when it comes to buying property insurance (see **Helpful Hint**).

1. You need to know the perils that you face as a homeowner or tenant.
2. You need some idea about the probability of a loss occurring and the severity of the loss if it occurs.
3. You need to determine your budget and how much you can spend on insurance premiums.

Although you might want to have insurance to protect against every possible loss, for most people this is not practical. Your insurance premiums would require too much of your free cash flow, leaving you insurance-rich but cash-poor. Instead, you should use a risk process as a guide to insuring your home and property, such as the following:

- Only buy insurance when an event is relatively unlikely to happen, but when it does, the cost is high (floods, theft, fire, etc.).

- Some risks can be retained or self-insured (that is, you will pay for it yourself) because even though the event may happen regularly (high probability), the cost of loss is low. Think of small home repairs, such as most plumbing issues, as being something you can self-insure.
- Some things happen very rarely, and even when they do, the cost of loss is low. These risks can be reduced (and not covered by insurance). For example, to avoid clogging pipes in the shower, a family can be diligent about using a hair catcher.
- There are some risks you should avoid simply because the probability of occurrence and the cost is high. For example, you should never smoke in bed.

Does this sound familiar? It should because it is essentially a summary of the rules found in the insurance matrix (Illustration 9.1.1) and shown again in **Illustration 9.6.2**.

ILLUSTRATION 9.6.2

Risk Matrix

		Frequency or Probability of Risk Event Occurring		
		High	**Medium**	**Low**
Severity of Risk	**High**	Avoid if possible (e.g., smoking in bed).	Avoid (e.g., hosting wild parties).	Purchase insurance (e.g., to cover damage from wind or hail).
	Medium	Management of risk required (e.g., keep windows and doors locked).	Management is beneficial (e.g., install security cameras around home or apartment).	Purchase insurance (e.g., to cover costs of property loss as a result of theft or fire).
	Low	Accept the risk or monitor it (e.g., battery failure in smoke detectors).	Accept the risk (e.g., failure of air conditioning unit).	Accept the risk (e.g., loss of lawn as a result of drought).

Source: Adapted from the Department of Homeland Security, *Risk Management Fundamentals*.

Once you determine what your risks are as a homeowner or tenant, you are then ready to purchase insurance. Let's begin the purchase process by reviewing important elements associated with homeowner's insurance.

Homeowner's Insurance

When you buy a home, your mortgage company will require that you purchase a **homeowner's coverage policy (HO policy)**. There are two main types of HO policies.

- A **named perils policy**, as the name implies, will only pay you if your loss is caused by something specifically listed in the policy (e.g., fire or smoke). These policies may be appropriate for a summer cottage or a low-value home.
- Typically, you will want instead a **special perils HO policy**. These policies will pay for any loss unless the peril is explicitly excluded in the policy, such as earthquakes, war, and mold (see **Helpful Hint**).

HELPFUL HINT

It is possible to purchase separate insurance for each excluded peril in a special perils HO policy.

HO Policy Coverage

An HO policy typically consists of six parts:

A. Replacement for your dwelling and personal property (you do not need to insure your land because your home may disappear, but your land will still be there).
B. Replacement for other structures on the insured property (limited to 10% of Part A).
C. Replacement for personal property (typically limited to 50% of Part A).
D. Loss of use payments (limited to 10–50% of Part A).
E. Liability coverage (typically $100,000).
F. Medical payment coverage for others injured on your property ($1,000 per person limit).

The cost of your HO policy (the premium) will depend on:

- The values purchased in Parts A through F and the location of your home. The higher the policy limits, the greater the premium. For example, you can increase your liability coverage under Part E, but doing so will increase the annual premium.
- The type of HO policy. A special perils HO policy will always cost more than a named perils policy.
- The amount of your deductible. Similar to auto insurance and health insurance, HO policies also have deductibles. Higher deductibles will result in lower premiums.
- The age of your home, how close you are to a fire station and fire hydrant, as well as other risk factors.
- Your credit score. You can expect to pay less in annual premiums as your credit score increases.
- How frequently you make claims and the type of claims made.

HELPFUL HINT

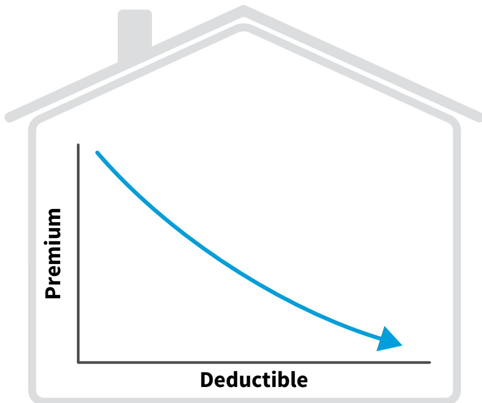
If you have borrowed money to purchase your home, your lender may require you to carry a low deductible, which will increase your premium.

Choosing your deductible is an important decision. Remember, as with all insurance policies, the *deductible* represents the amount that you must pay out of pocket before the insurance company will make repairs or payments. The decision regarding the amount of the deductible should be based on the amount you have in your emergency fund. If you have a well-funded emergency fund, then you may be able to manage a very high (say, $5,000) deductible. **Illustration 9.6.3** shows the relationship between your selected deductible amount and the annual premium you can expect to pay (see **Helpful Hint**).

As a final note, once you have insurance, you should be cautious when making claims. Your insurance company will track how many claims you make against your policy. If you have a high number of claims, your policy premium will increase. In some cases, your policy may be canceled by an insurance company.

ILLUSTRATION 9.6.3

The Relationship Between Deductibles and Premiums



Managing Your HO Policy

When it comes to buying and managing an HO policy, here are a few rules you should follow:

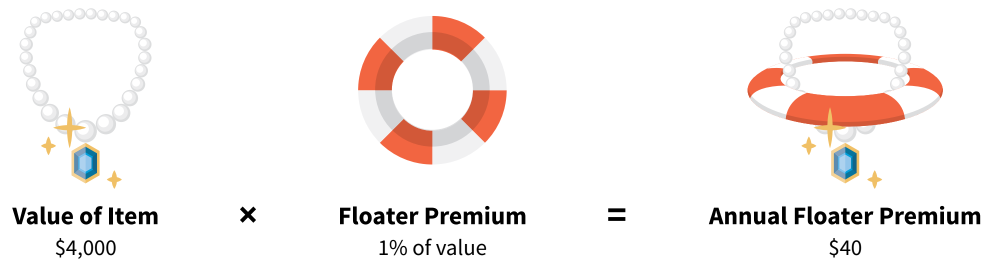
1. Inventory everything you own. This means videoing all your valuable possessions. Be sure to take pictures of serial numbers and, if possible, how much you paid for expensive items.
2. List anything with a value greater than $2,500, especially art, collectibles, precious metals, and gemstones. Nearly all insurance policies cap coverage for these types of personal property at $2,500 per item. So, if you have jewelry, art, guns, furs, collectibles, or other high-value property, you should purchase a **personal property floater** (sometimes called a *rider*) as a way to add extra coverage to your policy (see **Helpful Hint**). As shown in **Illustration 9.6.4**, the premium for items added on a floater will cost approximately 1% of the property's value on a yearly basis.

HELPFUL HINT

Insurance companies often call adding specific property to a policy a *schedule*.

ILLUSTRATION 9.6.4

Estimating the Premium Associated with a Personal Property Floater Rider



3. Think carefully before adding an **attractive nuisance** on your property. Swimming pools, for example, tend to increase the premium level of an HO policy because pools are notorious for causing liabilities and losses. This is also true for basketball courts and large swing sets or playgrounds located on your property.
4. If you live in a flood zone, you will need to purchase separate flood insurance through your insurance agent and the **Federal Emergency Management Agency**'s **National Flood Insurance Program (NFIP)**.
5. Make sure the HO policy provides inflation-adjusted replacement value. If you do not have replacement value, the insurance company will subtract wear and tear from the value of the lost property. You will then receive the depreciated value, which may not be enough to actually replace the lost property.
6. If you need it, increase the HO liability coverage (Part E) to at least $300,000 and purchase an **umbrella policy** or **excess liability coverage** in the amount of at least $1 million. An umbrella policy provides peace of mind just in case something bad happens. As shown in **Illustration 9.6.5**, an umbrella policy provides comprehensive liability protection that goes beyond your home (see **Helpful Hint**).

HELPFUL HINT

Umbrella liability coverage protects you anywhere you are, be it driving, on vacation, or at home, and is relatively inexpensive to purchase.

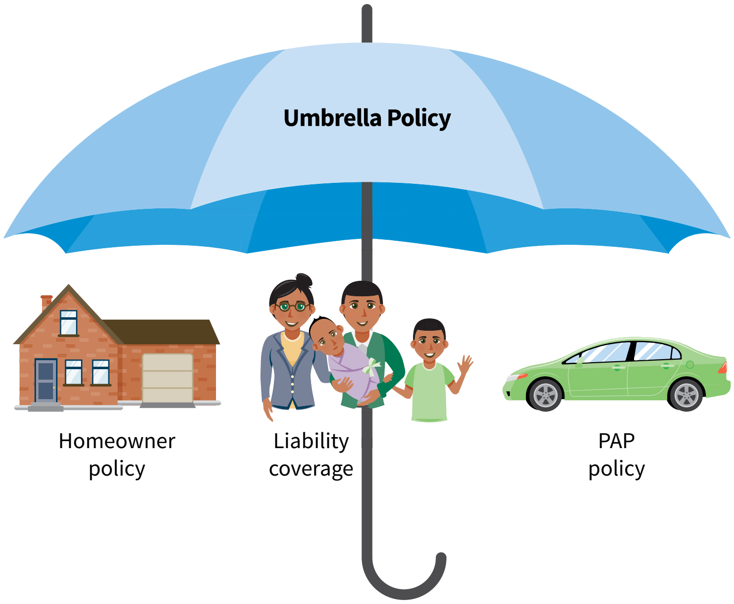


ILLUSTRATION 9.6.5

Comprehensive Liability Protection Offered by an Umbrella Policy

7. Consider adding identify theft protection to your HO policy. Although your premium will increase a bit, you will have some resources to access in case your identity gets stolen.

Renter's Insurance

Roughly 66% of Americans own their own home. For these people, having an HO policy in place is essential. But what about the one-third of Americans who rent their residence? The good news is that it is possible to purchase renter's insurance. **Renter's insurance** (sometimes called **tenant's insurance**) is similar to an HO policy except that it is designed to provide you with property replacement and liability coverage rather than insurance to replace your residence.

Why is renter's insurance important to have? Consider Edgar, who rents a nice apartment in a well-maintained building. Say a fire occurs and most of his personal property is destroyed.

- Edgar knows that the building's owner has insurance.
- Unfortunately, Edgar can't make a claim against the building owner's insurance to replace his property. The owner's policy does not cover tenant belongings.
- The only way for Edgar to protect himself is to purchase renter's insurance.

Cost of Renter's Insurance

Renter's insurance is inexpensive.

- Policies cost between $150 and $300 per year for $25,000 of coverage.
- You might be able to get a policy for less if you buy the insurance from the company that sold you auto coverage, as you may qualify for a multi-policy discount.

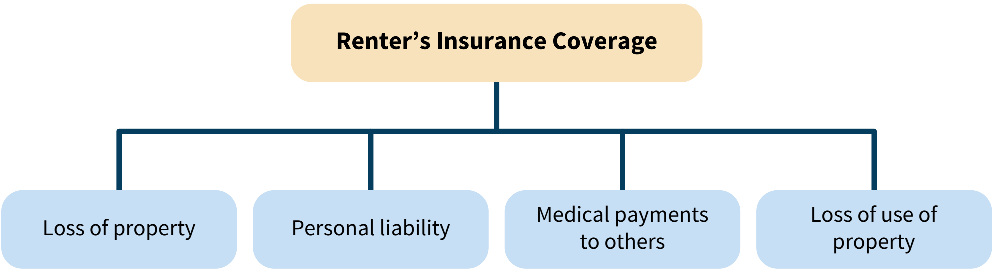
Renter's insurance is well worth its cost. As shown in **Illustration 9.6.6**, most policies typically cover loss of personal property, personal liability, medical payments to others, and the loss of use of the property (see **Helpful Hint**). Let's look at renter's insurance coverage in more detail.

HELPFUL HINT

If a fire destroys your apartment, renter's insurance will also cover the cost of a hotel until your apartment is repaired or you can find a new place to stay, a big benefit compared to the small annual cost for a policy.

ILLUSTRATION 9.6.6

The Broad Range of Coverage in a Renter's Insurance Policy



Renter's Insurance Coverage

Coverage associated with renter's insurance tends to be broad. You can get reimbursed if a loss is caused by fire, smoke, theft, vandalism, windstorm, lightning, explosion, falling objects (e.g., tree limbs), snow, ice, sleet, water, or electrical surges. Better yet, the loss does not need to occur in your apartment or rented residence. Basically, renter's insurance covers you no matter where you are. For example, if someone breaks into your car and steals your computer and phone, renter's insurance will cover it!

Just like with a traditional HO policy, you should think about the following issues before you purchase renter's insurance.

1. Buy extra coverage for expensive items like jewelry, art, antiques, and collectibles that would have limited coverage in a general policy because of their high values. The process of purchasing a personal property floater—called **scheduling the property** in the policy—is the same as an HO policy. You create a "schedule" of the items you want to insure. The cost is approximately 1% of the insured value.
2. Always insist on **replacement coverage** to ensure that you will get the full replacement cost of items lost.
3. Create a thorough inventory of all your property; you need to have proof of any lost or damaged items.
4. Consider buying an umbrella liability insurance; besides losing your property, you should always be concerned about covering costs associated with causing damage to other people and their property. For example, if you have a party at your apartment and someone falls and is injured, you may be held liable for all expenses associated with the injury. Without insurance, these costs come out of your pocket.

If you are still living at home or are away at college, you may be covered under your parents' HO policy. However, it is better for you to have your own policy. If you were to make a claim against your parents' policy, their premiums may increase. Further, depending on other claims made, they could lose their coverage. So, for just a few hundred dollars a year, you can be independent and responsible.

Concepts in Action

Lisa plays lead guitar in a band while also attending college. The band is very popular in the area, and Lisa has done well carving out a niche as a musician. She recently purchased her third guitar with additional sound equipment. In total, she has spent about $12,000 on guitars and related equipment. She is currently renting her apartment. What should Lisa be thinking about as she goes through the process of purchasing a renter's insurance policy? Do you think she needs a separate policy for her guitars? If yes, how much extra per year might a rider cost?

Solution

Lisa should definitely purchase renter's insurance. She can expect to pay about $150 for a good policy. In addition to a general policy, Lisa should have additional insurance on her music equipment, which can be done by adding a "schedule" of her music equipment to the policy. If something were to happen that destroyed or caused her to lose her music equipment, a general policy would not cover the full cost of replacing the equipment because of its high value (out of the ordinary). Therefore, Lisa should carry an additional insurance rider for her music equipment. Assuming she obtains a rider in the amount of $12,000, she can expect to pay about $120 extra per year for this coverage ($12,000 × 1%).

End-of-Topic Assessment

Multiple-Choice Questions

1. A careless attitude on the part of an insurance policyholder is a:

- **a.** managed hazard.
- **b.** morale hazard.
- **c.** physical hazard.
- **d.** moral hazard.

2. All of the following are examples of morale hazard, *except*:

- **a.** keeping a messy house full of paper and other flammable items.
- **b.** smoking in bed before falling asleep.
- **c.** habitually leaving hot stoves unattended.
- **d.** filing false insurance claims.

3. For which of the following hazards would "avoidance" be the best primary strategy?

- **a.** Throwing a block party at your house.
- **b.** Owning a wood-built house.
- **c.** Owning a high-end television.
- **d.** Having a house with multiple stairs.

4. What should you do if you know that an event has a high probability of occurring but a low cost when the event actually happens?

- **a.** Self-insure.
- **b.** Reduce risk.
- **c.** Buy insurance.
- **d.** Avoid risk.

5. With a named perils HO policy, which of the following risks would be covered?

I. Earthquakes and floods.
II. A risk specifically listed in the policy.
III. Fire, windstorm, or smoke.

- **a.** II only.
- **b.** I and III only.
- **c.** II and III only.
- **d.** I, II, and III.

6. With a special perils HO policy, which of the following risks would be covered?

- **a.** Earthquakes and floods.
- **b.** Fire, windstorm, and floods.
- **c.** Termite damage.
- **d.** Earthquakes, fire, windstorm, floods, and termite damage.

7. Which part of a standard HO policy can you find information about your liability coverage?

- **a.** Part A.
- **b.** Part C.
- **c.** Part E.
- **d.** Part G.

8. What would be considered an attractive nuisance on your property?

- **a.** A basketball court.
- **b.** A swimming pool.
- **c.** A swing set.
- **d.** A basketball court, swimming pool, or a swing set.

9. Why should you consider buying umbrella liability insurance?

I. It provides peace of mind.
II. It is inexpensive coverage.
III. It provides additional liability coverage.

a. I only.
b. I and III only.
c. II and III only.
d. I, II, and III.

10. Renter's insurance typically covers:

a. loss of personal property.
b. loss of the use of the property.
c. personal liability.
d. loss of personal property, loss of use of property, and personal liability.

Adventures in Personal Finance

Short Answer

1. Brent's daughter, Caroline, recently got her driver's license. Brent usually lends his car to Caroline on the weekends. One weekend, Caroline was involved in a terrible accident when she slammed into oncoming traffic, critically injuring several passengers in two other cars. Caroline, however, escaped without serious injury. Though Caroline is covered under Brent's auto insurance policy, he is concerned that his coverage will fall far short of his ultimate liability. Explain how Brent could have obtained far greater coverage than his auto insurance provides and protected himself against a catastrophic loss.

2. Gary just purchased a new home. It's a great house that has a hidden basketball court in the backyard (referred to as an attractive nuisance). Though most people cannot see the court from the street, Gary suspects local kids are sneaking onto the property and playing ball when he and his wife are away. Should Gary keep the basketball court? If he does keep the basketball court, how can he protect himself against liability if the kids get hurt while playing on it?

3. Jimmy and Janice are age 28 and 27, respectively. They recently got married and are beginning to build wealth. They both work long hours and are extremely frugal. They decided to keep their old cars, a 2005 Nissan Sentra and a 1999 Jeep Wrangler, indefinitely. They also just purchased a new home, with cash, near downtown Indianapolis. What are their risk exposures and what can they do to manage or eliminate them?

4. Match the following HO basic coverages.

a. Part A.	**1.** Liability coverage.
b. Part B.	**2.** Medical payment coverage for others injured on your property.
c. Part C.	**3.** Dwelling replacement.
d. Part D.	**4.** Replacement of personal property.
e. Part E.	**5.** Loss of use payments.
f. Part F.	**6.** Replacement for other dwellings on property.

Explore

1. Tabatha lives in Georgia. Occasionally, but not often, an earthquake occurs in nearby South Carolina. These quakes are sometimes large enough to be felt in Georgia but rarely result in damage. However, experts are now predicting a more catastrophic quake could happen in the future. Tabatha is worried because her current HO policy excludes all damage from earthquakes. Explain why Tabatha should, or should not, purchase earthquake coverage.

2. **Presentation** Search the Internet to research how frequently multi-family residential building (apartment building) fires occur. Are these types of fires more or less frequent compared to residential building fires? What is the dollar amount of losses from residential property fires each year? Cite your sources and share your findings with your classmates.

Expanded Learning Activity

Think about where you are living right now. What would happen if your residence burned down while you were away? What would you lose in the fire? Is your emergency fund sufficient to pay for all of these things, as well as the costs associated with finding a new place to stay? Make an inventory of the things in your residence and assign (or go online to research) a replacement value for each of your possessions (include clothing, jewelry, appliances, furniture, etc.). Call a local property and casualty insurance office and get a quote for how much it would cost to purchase renter's insurance for your items. Is it affordable? Besides covering replacement value, in what other ways is renter's insurance beneficial?

Long-Term Care Insurance

LO 9.7 List different strategies and available insurance for meeting long-term care needs.

Can you imagine a time when you might not be able to bathe yourself, fix your own food or eat it by yourself, dress yourself, use the bathroom on your own, or even get out of bed without assistance? These basic activities are referred to as **activities of daily living (ADL)**. Your ability to perform these functions determines to what extent you can live on your own or need assistance from others.

For most individuals who are currently healthy, the possibility of physically not being able to take care of themselves seems remote. However, we all may eventually require someone else's help managing the basics of life. The need for long-term care assistance is something everyone should consider, especially as this type of care is expensive. Considering that it can cost $100,000 or more per year in some states for care, this type of expenditure can quickly deplete your life savings and jeopardize a spouse's or partner's remaining financial journey as well as your own. In this topic, we explore the options associated with long-term care needs and the role of long-term care insurance.

Overview of Long-Term Care Insurance

Illustration 9.7.1 shows the staggering numbers and probabilities associated with old age and the need for help with ADL. When someone is unable to perform at least two ADL on a regular basis, she or he is thought to need **long-term care**. As noted above, the financial costs associated with needing long-term care can be quite significant (we will discuss some of these costs later). Right now, let's focus on a way to transfer the potential financial risk associated with long-term care needs: the purchase of **long-term care insurance** (see **Helpful Hint**).

HELPFUL HINT

Long-term care insurance is sometimes called nursing home insurance.

ILLUSTRATION 9.7.1

Numbers and Probabilities Associated with Old Age and ADL

81 million	The number of people that will be age 65 and older living in the United States in 2050.
40 million	Number of people age 65 and older living in the United States in 2010.
34 million	Number of people who provide any care to someone age 50 or older.
68%	Probability of being unable to perform two ADL at some point in time for those age 65 and older.
40%	The percentage of individuals who reach 65 that will need a nursing home in their lifetime.

Source: L. Harris-Kojetin, M. Sengupta, E. Park-Lee, and R. Valverde, *Long-Term Care Services in the United States: 2013 Overview* (Hyattsville, MD: National Center for Health Statistics, 2013).

With long-term care insurance, some of the risk associated with paying for long-term care costs is transferred to an insurance company.

- That is, the insurance company will pay a predefined daily, monthly, or lifetime amount to the insured individual or designated caregiver as a way to help pay for the costs of care.
- It is important to remember, however, that a long-term care insurance policy will generally not eliminate all of the costs if care is needed.

For example, assume that one of your relatives is getting older and is unable to perform at least two ADL. If your relative has a long-term care insurance policy—and the policy's premiums have been paid—your relative will be eligible to receive benefits from the policy. However, there is one significant stipulation that must occur before a payment will be made. Your relative must cover all costs during an elimination period.

Elimination Period

Long-term care insurance does not have a traditional deductible, like automobile or homeowner's insurance. Instead, long-term care policies use something called an *elimination period*.

- An **elimination period** is the waiting phase between the time the insured individual qualifies for benefits and when the insurance carrier begins providing benefits.
- This is usually between 1 and 3 months, but it can be longer.
- This is important to know because one way to reduce long-term care insurance premiums is to extend the elimination period for as long as possible.
- You can do this by aggressively saving into an emergency fund and using that money to cover short-term care needs.

Say, for example, that a policy has a 100-day elimination period and that the cost of long-term care in a community is $80,000. Using a 360-day billing cycle, this means that the cost per day is approximately $222 ($80,000 ÷ 360). An insured would need an emergency fund of $22,222 to meet elimination period expenses ($80,000 ÷ 360 = $222.22 × 100 = $22,222). Let's now review what long-term care insurance covers.

Benefits of Long-Term Care Insurance

Long-term care insurance typically has two different benefit amounts that pay for different services.

1. **Skilled nursing care** that provides around-the-clock medical care, most often in a nursing home.
2. **Home care**, which provides a benefit of usually half the amount paid for skilled nursing care. Home care is intended to pay for services provided to you or your relative at home. Some policies require all care providers to be licensed, whereas other policies will pay family members who are providing the care.

Nearly all long-term care policies also include:

- A set **benefit period**, which specifies the length of time benefits will be paid. This benefit period could be a few months (very rare) to many years.
- A set **benefit limit**, which specifies the maximum amount the policy will pay. Some policies, for example, have a flat benefit limit equal to, say, $300,000 or $400,000. Other policies have daily or monthly maximum benefits.

HELPFUL HINT

You don't need to buy 100% coverage. You can purchase a policy that pays a portion of expenses while you cover the remaining expenses from cash flow and assets.

An important question to ask is how much long-term care insurance is appropriate? To answer this question, you need to make some assumptions. Let's say that the cost of long-term care services averages $300 per day. Also assume that you anticipate needing coverage for 4 years. Based on a 360-day billing cycle, you would want a policy with benefits of $432,000 ($300 × 360 × 4 = $432,000). Without a policy, you would need to fund these expenses from assets (see **Helpful Hint**).

As you can see, long-term care insurance can be a useful tool to protect you and your relatives over your lifetime financial journey. Even if you end up taking care of your relative yourself, a long-term care insurance policy will provide you and your family some additional resources that can be used to provide care.

Concepts in Action

Buck is age 60 and currently healthy. He is single and worried about what might happen if his mental or physical health were to decline. His worry prompted him to explore nursing home facilities in his area. He found a very nice nursing home that charges approximately $63,000 per year, which is close to $175 per day. He also received a quote for a long-term care policy that will pay $3,000 per month. The policy has the following features.

- Private policy: Yes.
- Elimination period: 180 days.
- Billing cycle: 360 days.
- Benefit period: 5 years.
- Benefit limit: 80% of actual cost.
- Inflation protection: None.

Help Buck by answering the following questions.

1. How much does Buck need in an emergency savings fund to meet the policy's elimination period?
2. How much will the insurance company pay on a daily and yearly basis for Buck's care after the elimination period?
3. How will Buck pay for the amount not covered in the long-term care policy?
4. If the annual premium for the policy is too high, how might Buck lower his annual premium cost?
5. What will happen if Buck added an inflation adjustment to the policy?

Solution

1. Given the policy, Buck will need to pay for the first 180 days of nursing home care out of pocket. This means that he will need $31,500 before any benefits are paid.
2. Once the elimination period has been met, the insurance company will pay 80% of all expenses for up to 5 years. This works out to a daily benefit of $140 ($175 × 80%) or a yearly benefit of $50,400 ($63,000 × 80%). Keep in mind, however, that during the first year he will only receive $18,900 because of the long elimination period ($50,400 – $31,500).
3. The remaining 20% of the need must come from Buck's savings or investments. If Buck needs benefits beyond 5 years, he will need to deplete his remaining assets to cover ongoing costs.
4. If the annual premium is too high, Buck could lower the annual cost by shortening the benefit period to 2 years.
5. If Buck added an inflation adjustment—a rider that makes sure the benefit keeps pace with inflation—the annual cost for his quoted policy will be significantly higher. Given that Buck might not use the insurance for another 10 years or more (and long-term care costs would be increasing during that time), an inflation rider would be a wise purchase.

Who Needs Long-Term Care Insurance?

When to Buy It

There is a common misconception among the general public that only the elderly need assistance with ADL. You might be surprised to discover that this is not always the case. In fact, you may already know someone younger than age 65 who needs help. Consider these facts:

- More than 33% of the residents at adult daycare centers are younger than age 65.
- About 15% of the residents of nursing homes are younger than age 65.

Although it may be difficult to imagine yourself ever needing long-term care assistance, you ought to at least think about the possibility. Here are a few rules to help you decide when you should start thinking about purchasing a long-term care policy (see **Illustration 9.7.2**):

1. If you are young and just starting out on your lifetime financial journey, long-term care coverage can wait. It is better to begin an emergency savings fund and buy disability and life insurance.
2. Later during your financial journey, when you turn age 50, you should begin thinking about adding long-term care coverage to your financial plan.
3. If you wait until age 70 or older, you'll find that the premiums may be too high.

ILLUSTRATION 9.7.2

Long-Term Care Purchasing Guidelines

Age 20–50	Age 50–70	Age 70 or Older
Build savings for the future.	Consider purchasing long-term care policy.	Premium cost may be too high.

Cost of Long-Term Care

Take a moment to think about how another person's need for long-term care assistance during his or her lifetime might affect you.

- If you have a family member age 65 or older, there is a possibility that you or someone close to you may be asked to provide care for that person in the future. Would you be able to provide such care?
- Besides the actual physical labor involved, would you be able to afford the costs associated with providing care?
- How would providing care affect your schooling, career, and family life?

According to the **Family Caregiver Alliance**, about 78% of the elderly that need long-term care assistance receive all their care from family members and friends, whereas another 14% receive care from a combination of family and paid services.[1] Although most people are happy to provide a loved one the care that is needed, doing so can be disruptive to family patterns and careers. The stress involved with providing care can cause households to relocate and couples to separate.

HELPFUL HINT

It generally is worthwhile to encourage your family members to consider long-term care insurance at some point in the future.

Certainly, there are businesses that provide long-term care assistance for a fee. So, why don't more families use these services to provide care to those in need? The answer is, unfortunately, cost. Look carefully at the costs for long-term care insurance shown in **Illustration 9.7.3**. Few families have the resources to cover these expenses for an extended period of time (see **Helpful Hint**). Specifically:

- The basic costs per month and per year for different levels of care that an individual may need outstrip the incomes of most retired households.
- Keep in mind that these are the national median costs. Some locations will be higher; for example, according to the New York Department of Health, the annual cost of a nursing home in New York City is closer to $145,000.[2]

ILLUSTRATION 9.7.3

Long-Term Care Services, Alternatives, and Costs

Nursing Home Semi-Private Room	Nursing Home Private Room	Assisted Living Center	Home Health Aid
$7,100 monthly	$8,100 monthly	$3,750 monthly	$4,100 monthly (4 hours per day)
$85,200 yearly	$97,200 yearly	$45,000 yearly	$49,200 yearly

Source: Genworth, "Compare Long Term Care Costs Across the United States" (2017), https://www.genworth.com/about-us/industry-expertise/cost-of-care.html.

Medicare and Medicaid

There are lots of myths surrounding long-term care. One of the biggest myths is that if you or a relative needs long-term care services, the government will step in and help you financially. Although it is true that those who are retired and those who have modest incomes and assets may qualify for two government programs (Medicare and Medicaid), it is wrong to assume that these government programs will pay for long-term care expenses. Let's briefly look at these two governmental programs.

Medicare

Medicare is government-provided health insurance program that is available to those age 65 or older. Unfortunately, Medicare covers only limited long-term care expenses. Although the details are too complex to explore here, it is important to remember that Medicare benefits are extremely limited—usually restricted to only a few months of total care over an individual's lifetime.

[1] Source: Family Caregiver Alliance, *Selected Long-Term Care Statistics*. (retrieved October 6, 2017, from https://caregiver.org/selected-long-term-care-statistics).

[2] Source: New York Department of Health, *Nursing Homes in New York State*.

Medicaid

Medicaid is a governmental comprehensive health insurance program that is designed to provide essential medical care for the neediest in society (see **Helpful Hint**).

- To qualify for Medicaid, a person must have both limited income and limited assets.
- Although Medicaid will pay for long-term care services, using Medicaid as a planning strategy is problematic because, at a minimum, you will need to spend down your assets to the poverty level.

HELPFUL HINT

If you implement the tools and techniques presented throughout this text, you will likely not qualify for Medicaid.

Becoming a Help Provider

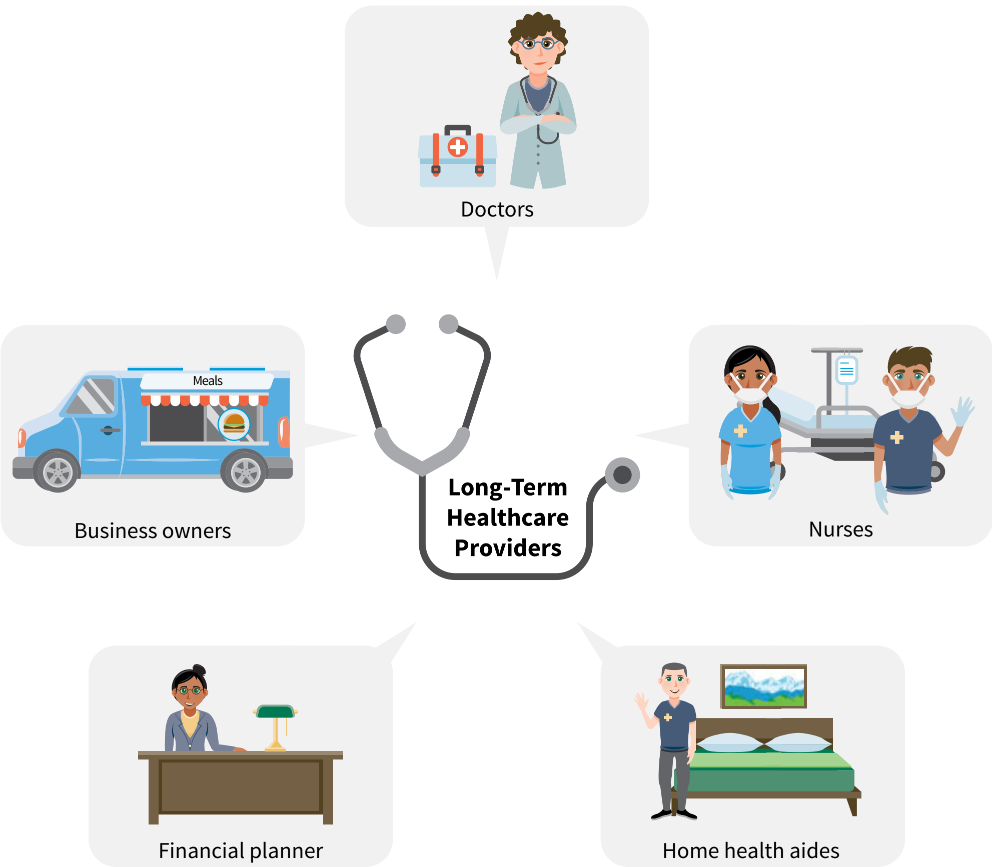
You have learned about investing in yourself (human capital investment) throughout this text. If you have a desire or natural ability to work in the field of elder care, then investing in yourself to gain additional training and expertise in this industry may be one of the best investments you can make. In the near future, both the number of individuals needing long-term care assistance and the number of people paying for that assistance is expected to double, far outpacing the current supply of paid caregivers.

1. Life expectancies in the United States continue to climb. In fact, the fastest-growing segment of the population includes those age 85 and older.
2. Although family and friends will continue to provide the bulk of assistance in the future, the combination of falling birth rates in the United States, coupled with a more mobile workforce, means that there are fewer younger family members living near aging family members.

You may have just the right personality to work with those in need of care, or you may have the skill set necessary to help manage those providing care. Alternatively, you may prefer to provide long-term care insurance solutions to consumers. As shown in **Illustration 9.7.4**,

ILLUSTRATION 9.7.4

Providers of Long-Term Care Services



there are numerous ways you can interact with long-term care providers. You might just find your passion is caring for the elderly, either as a nurse, a doctor, a home health aide, a financial planner, or a business owner providing valuable services to individuals and families.

End-of-Topic Assessment

Multiple-Choice Questions

1. To qualify for benefits to begin in most long-term care policies, you must be unable to do how many ADL?
   - **a.** One or more.
   - **b.** Two or more.
   - **c.** Three or more.
   - **d.** Four or more.
2. An elimination period is:
   - **a.** the period between the beginning of long-term care benefits and the policy termination.
   - **b.** the maximum benefit period associated with a long-term care policy.
   - **c.** the period between the start of premium payments and the need for care.
   - **d.** the amount of time you must wait for long-term care insurance benefits to begin.
3. **Calculate** If Micala needs long-term care services at age 70 and the cost of care at that time is $350 per day, how much will she need in savings to cover a 180-day elimination period (assuming a 360-day billing cycle)?
   - **a.** $31,500.
   - **b.** $63,000.
   - **c.** $75,600.
   - **d.** $126,000.
4. **Calculate** What maximum benefit limit should Abed choose if he expects the cost of long-term care coverage to be $200 per day and he anticipates needing long-term care services for 3 years (assuming a 360-day billing cycle)?
   - **a.** $72,000.
   - **b.** $144,000.
   - **c.** $216,000.
   - **d.** $360,000.
5. **Calculate** A long-term care policy issued by Athens Insurance Underwriters, Inc. pays a maximum daily benefit of $175 or 80% of the actual daily cost, whichever is higher. How much will Ramone need to pay in out-of-pocket costs if he purchases the policy with a 60-day elimination period, assuming that the first year's cost of care is $81,000 (and assuming a 360-day billing cycle)?
   - **a.** $10,500.
   - **b.** $10,800.
   - **c.** $13,500.
   - **d.** $27,000.
6. **Calculate** A long-term care policy issued by Athens Insurance Underwriters, Inc. pays a maximum daily benefit of $175 or 80% of the actual daily cost, whichever is higher. How much will Ramone receive in daily benefits from the long-term care insurance policy if he uses the services of a nursing home that has an annual cost of care of $63,000 (assume a 360-day billing cycle)?
   - **a.** $175.
   - **b.** $180.
   - **c.** $195.
   - **d.** $225.
7. **Calculate** The cost of nursing home care in a community is $70,000 per year. If a nursing home uses a 360-day billing cycle, how much will someone need to pay for services if the long-term care insurance policy has a 100-day elimination period?
   - **a.** $17,500.
   - **b.** $19,444.
   - **c.** $24,500.
   - **d.** $35,000.
8. What risk does Sarah run if she chooses a long-term care policy with a short benefit period of 2 years?
   - **a.** The elimination need will be quite large.
   - **b.** The cost of the policy will be higher than those with a longer benefit period.
   - **c.** If she needs care beyond 2 years, she will need to fund these costs from her own savings or investments.
   - **d.** The elimination need will be quite large and, if she needs care beyond 2 years, she will need to fund these costs from her own savings and investments.
9. Micala is contemplating how she is going to pay for long-term care services if she ever needs help with ADL in the future. Currently, Micala is age 42. Should she purchase a long-term care insurance policy now?
   - **a.** Yes, because the risks associated with ADL is just as high at age 42 as it is at age 62.
   - **b.** No, because the risk of needing long-term care insurance benefits is very low now.
   - **c.** Yes, because she can lock in a low elimination period because of her age.
   - **d.** No, because the benefit periods available to someone her age are too low.

10. **Calculate** Micala has estimated that the daily cost of a good nursing home facility in her area is currently $175 per day. If she needs long-term care services at age 70 and she is currently age 42, how much will the facility cost at that time if inflation averages 3% (use the future value formula of a lump sum)?

a. $224.
b. $312.
c. $400.
d. $7,513.

Adventures in Personal Finance

Short Answer

1. What are the six primary activities of daily living?
2. **Calculate** If the cost of long-term care is $81,000 per year, how much is the daily cost, assuming the nursing home bills on a 360-day basis?
3. **Calculate** Assume a nursing home charges $69,000 per year with a 360-day billing cycle. How much must Shelia pay out of pocket if her long-term care insurance policy has a 180-day elimination period (round your answer)?

Explore

1. **Writing** To properly prepare for future long-term care needs, families should have open and honest conversations about what is being planned. For this assignment, ask two people older than age 50 what their future plans are regarding long-term care assistance should they need it. Do they have a long-term care insurance policy? Do they know about long-term care insurance? Have they discussed this with their family members? Write a one-page summary about what you learned from your discussion.
2. **Calculate** Visit the **New York Department of Financial Services** long-term care website and click on the link that takes you to its long-term care insurance premium cost calculator. Use the cost calculator to determine the premium differences for an assortment of policies with different benefit and elimination periods. Also, determine the additional cost of a policy with inflation protection compared to a regular policy.

Expanded Learning Activity

Writing **Presentation** The **U.S. Census Bureau** often makes projections about what the population will look like in the future. Visit the Census Bureau website to learn more about the aging of the United States. Based on the information, answer the following questions.

- What age groups of individuals will have the largest growth rate in the coming decades?
- Which age groups of individuals will have slower growth rates in the coming decades?
- How might this affect how or who receives and provides long-term care assistance in society?
- Could this have additional effects elsewhere in society?

Write a brief reaction paper based on your answer to these questions. Be sure to share your paper and thoughts with others in class.

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

9.1 Describe the importance of health management and general insurance. Your ultimate level of personal and financial well-being is closely associated with your health status. This is the reason it is so important to be proactive in taking steps to manage your health behavior. When you are healthy, you are in the best position to increase your human and social capital, both of which are important tools that can be used to guide you along your lifetime financial journey. An important element associated with the relationship between health and human capital is the notion of risk management, including avoiding bad behavior; retaining some risks; managing other risks; and, when appropriate, transferring risks to a third party, like an insurance company.

9.2 Explain the options, costs, and requirements associated with health insurance. Unexpected health risks can be costly. If not managed correctly, a health scare can derail your financial journey. There are two ways to manage health risks: (1) avoid behavior that increases the chance of illness and (2) use insurance as a management tool. As such, it is important to understand how health insurance policies work. Being able to describe concepts such as premium, deductible, coinsurance, and out-of-pocket maximums is a foundational element of becoming financially knowledgeable.

9.3 Discuss the need for disability insurance and the key features of disability insurance policies. Over the course of your working life, you're more likely to become disabled than you are to die. Disability is defined to mean that you can't do the work you did before an accident or illness, and you can't readjust your skills because of your medical condition. The Social Security Administration uses a strict definition of disability for those who wish to claim benefits, whereas private insurance disability policies tend to be more flexible. The difference between an "any" and "own" occupation definition can mean the denial or receipt of benefits. Generally, healthy individuals need long-term disability coverage equal to 65% of their income. The need for disability coverage is highest among those with high debt, modest assets, and limited sources of income.

9.4 Describe the types of life insurance policies and how to develop a plan for optimal life insurance coverage. The unexpected death of a family member can create emotional and financial dilemmas for families. Life insurance is an essential financial planning tool that can be used to manage an unexpected death. Life insurance provides a tax-free, lump-sum payout that can be used to help pay final expenses, as well as fund a family's financial goals. There are four primary parties to a life insurance contract: (1) the policy owner, (2) the insured, (3) the beneficiary, and (4) the insurance company. Although it is possible for the owner, insured, and beneficiary to be the same or different people, it is more common for the owner and the insured to be the same person, with the beneficiary being a spouse or other close family member. Common types of life insurance include term, whole, universal life, variable life, and variable universal life insurance. Term insurance is pure insurance, whereas the other types of insurance include a savings element. It is important to understand the basics of life insurance because it is likely that life insurance will be used as a financial planning tool at some point in your financial journey.

9.5 Identify the need for automobile insurance and the key coverage elements to include as part of an automobile insurance policy. A personal automobile policy (PAP) is designed to protect you from liabilities arising from accidents in which you are partly or totally responsible. Although each state has a minimum split limit coverage requirement, most financial planners recommend that you carry significantly more coverage to minimize threats to your personal assets should you be held liable for an accident. Key terms associated with PAPs include premiums, deductibles, liability coverage, collision coverage, comprehensive coverage, and uninsured/underinsured motorist coverage. Purchasing and maintaining appropriate levels of coverage is an important approach when managing the risks in your life.

9.6 Describe the benefits of insurance to protect the personal and real property of homeowners and renters. Protecting your property from theft, loss, and damage is an essential activity for anyone beginning or continuing her or his financial journey. Although there are many perils and hazards that exist, it is also true that there are insurance tools that can be used to manage property risks. For those who own their home, purchasing a homeowner's policy is an important financial planning step. There are also insurance products available for those who rent. While replacement of property is a primary reason most people buy property insurance, a less well-known but equally important reason is to reduce liability exposure. Homeowner's, renter's, and umbrella policies provide policyholders with protection against liability claims. As such, property insurance acts as a safety net.

9.7 List different strategies and available insurance for meeting long-term care needs. The issue of potentially needing long-term care services is something everyone should consider. For those who are just starting their financial journey, worries about needing help with activities of daily living may seem remote and insignificant. However, the need for long-term care planning is increasing in importance. The burden of helping older family members almost always falls on those who are younger. There are multiple ways to plan for long-term care needs. One is to save and invest aggressively to build up assets that can be used to cover potential expenses in the future. Another strategy involves transferring all or some of the risk to an insurance company by purchasing long-term care insurance. For those who are so inclined, there are many new and exciting opportunities emerging in the long-term care field to help others. These new career opportunities may be something worth considering as you continue your lifetime financial journey.

Continuing Case: Tarek's Financial Journey

Tarek and Samantha are thinking about starting a family. In preparation for this new phase of their life, they visited a local hospital to learn about the costs of delivery and care. They learned that the average cost for a normal birth is $8,000. This took Tarek's breath away, until he remembered his employer-provided insurance coverage, under which he and Samantha are covered. The plan features are as follows.

- $500 per person deductible.
- 20% coinsurance.
- $2,500 out-of-pocket yearly maximum.

Instructions

a. Based on the hospital's estimate and their insurance policy, how much will Tarek and Samantha pay if Samantha gives birth in early January (the beginning of a new insurance year)? How much will the insurance company pay?

b. Since you last checked in with Tarek, he received a promotion and raise at work. His new annual income is $49,000. Given his new promotion and the fact that he and Samantha are thinking of starting a family, he is considering buying a disability policy. Because his employer does not provide this as an employee benefit, he needs to buy a policy in the open market. How much replacement income should he shop for? How much might this type of policy cost per year?

c. As a hopeful new mother, Samantha is anxious to make sure that, as a family, their financial house is in order. She is thinking about buying a life insurance policy. Right now, she has $50,000 in coverage from her employer. Based on the estimation procedure presented in the chapter, how much additional coverage should she shop for if her current salary is $33,000 per year?

d. What type of life insurance policy should Samantha consider if she would like to have a guaranteed cash value that she can eventually use to help pay for her child's college education? What's a potential disadvantage associated with this type of policy?

e. What should they do if Tarek and Samantha are most interested in buying the maximum amount of life insurance possible, for a period of 30 years, with the lowest premium? What provisions should they consider adding to newly issued life insurance policies?

f. Tarek has been collecting sports memorabilia for many years. Right now, his collection is worth only $750. Does he need a personal property rider (floater) at this time? Let's say that he continues to collect and the value of the memorabilia increases to $3,000. Will he need a personal property rider at that time? If yes, approximately how much will the rider cost?

Calculating the Cost of Life's Financial Journey

Marcel and TJ have been married for 35 years. Both are in great health, but they feel it is time that they start planning for their future health needs. Marcel is 60 years old, and TJ is 61 years old. They have been approached by a long-term care insurance salesperson who is offering the following insurance product.

- Annual maximum benefit: $60,000 or 80% of annual cost, whichever is less.
- Daily maximum benefit: $167 or 80% of daily cost, whichever is less.
- Billing cycle: 360 days.
- Premium for policy with 180-day elimination period: $2,900.
- Premium for policy with 90-day elimination period: $3,300.
- Premium for policy with 30-day elimination period: $3,800.

Instructions

Marcel and TJ are interested in possibly purchasing one of these policies. Use the following information to help them analyze which policy may be the best alternative.

- The current annual cost of a good nursing care facility is $72,000.
- They have $25,000 saved in a money market savings account, $10,000 in a 1-year CD, and $12,000 in EE savings bonds.

a. Analyze each of the options. How much will they need to pay before benefits begin if Marcel purchased a policy today and needed long-term care services this year? Show your estimate for each elimination period.

b. How much will they pay in total premiums if Marcel purchases a policy today and begins using the policy at age 72? Calculate an estimate for each elimination period.

c. If Marcel purchases the policy with a 180-day elimination period, how much will they receive as a benefit in his first year in a nursing home facility (assume an annual cost of $72,000)? If the annual cost does not increase, how much will they receive in benefits in the second year?

d. If they do not buy a long-term care insurance policy and assuming that the annual cost of services remains stable at $72,000 per year, how much will they need to save over the next 12 years, earning a 7% annual rate of return, in order to cover 100% of the cost of nursing home care if Marcel receives 3 years of service?

e. If they have a limited budget and are most concerned about obtaining coverage for Marcel, should they buy a long-term care policy or attempt to save the amount needed?

Planning for the Future

Tug Nogene is 28 years old. He is married to Anna Nogene, who is 29 years old. Tug is an executive with a midsize manufacturing firm. Anna is a stay-at-home mom. They both received their driver's licenses at age 16 and have never been involved in a car accident (although Tug has received two speeding tickets over the past few years). They currently own their own home and just purchased a new Honda Civic.

Instructions

Help Tug and Anna shop for a new personal automobile insurance policy. Use the following information when answering their questions.

- There is a loan outstanding on the car.
- Tug uses the car to drive to and from work (20 miles one way).
- They drive the car 15,000 annual miles.
- The car has a factory-installed alarm system.

a. Conduct an Internet search of at least three automobile insurance companies and obtain information to complete the following table. Based on your research, what insurance company should Tug and Anna choose? Why?

	Desired Policy Details	Insurer 1	Insurer 2	Insurer 3
Bodily injury per person	$100,000			
Bodily injury per accident	$300,000			
Property damage	$50,000			
Comprehensive deductible	$500			
Collision deductible	$500			
Medical	$5,000			
Rental car coverage	Yes			
Towing coverage	Yes			
Uninsured/ underinsured motorist coverage ($250 deductible)	$100,000 person/ $300,000 accident/ $50,000 property			
Annual premium				

b. What types of policy premium discounts might they qualify for?

c. Tug would like to know how much their premiums would have been had they instead purchased a Mercedes C-class car. Using the same insurance companies, rerun the estimates based on this type of car. Given the new evaluation, what insurance company should they choose? Why?

d. Summarize the results of your analyses into a brief one- or two-paragraph write-up. Be sure to share the results of your research with others in class. During the discussion, tally the number of firms that were evaluated and look for commonalities in recommendations.

e. Use the same analysis procedure for your current car. If you do not own a car, evaluate the insurance companies based on your “dream” car. Based on what you learn, would you change your current insurer? Why or why not?

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

CHAPTER **10**

Planning for the Future: Retirement and Estate Planning


Sam Edwards/OJO Images/Getty Images

LEARNING OBJECTIVES

Once you have finished reading and working through the material in this chapter, you will be able to:

10.1 Discuss the need and responsibility for retirement planning.

10.2 Explain how to use individual retirement accounts (IRAs) to save for the future.

10.3 Identify the multiple ways property can be held and transferred.

10.4 Explain the use of wills as a tool to transfer property after death.

10.5 Describe the purpose of living wills, advanced directives, and powers of attorney.

10.6 Explain how professionals can help you navigate your financial journey.

In this chapter, we introduce you to topics related to building long-term wealth and estate planning. Being proactive today helps to ensure that you will be in a better position to meet your needs in the future. Specifically, you will learn about common types of retirement plans and individual retirement accounts (IRAs, also known as individual retirement arrangements).

This chapter also provides information on another crucially important issue: learning how to take control of your financial situation and your assets in case of death or incapacity. For example, consider this staggering result from a Harris Interactive national poll: less than 50% of Americans have a will, a living will, or a power of attorney.[1] As you will learn in this chapter, these are the basic documents associated with the management and planning of your estate. Equally important, older loved ones in your life may also lack these critical planning documents. Helping them obtain these documents could be a tremendous help to surviving family and friends. Finally, we will discuss how to find appropriate financial professionals.

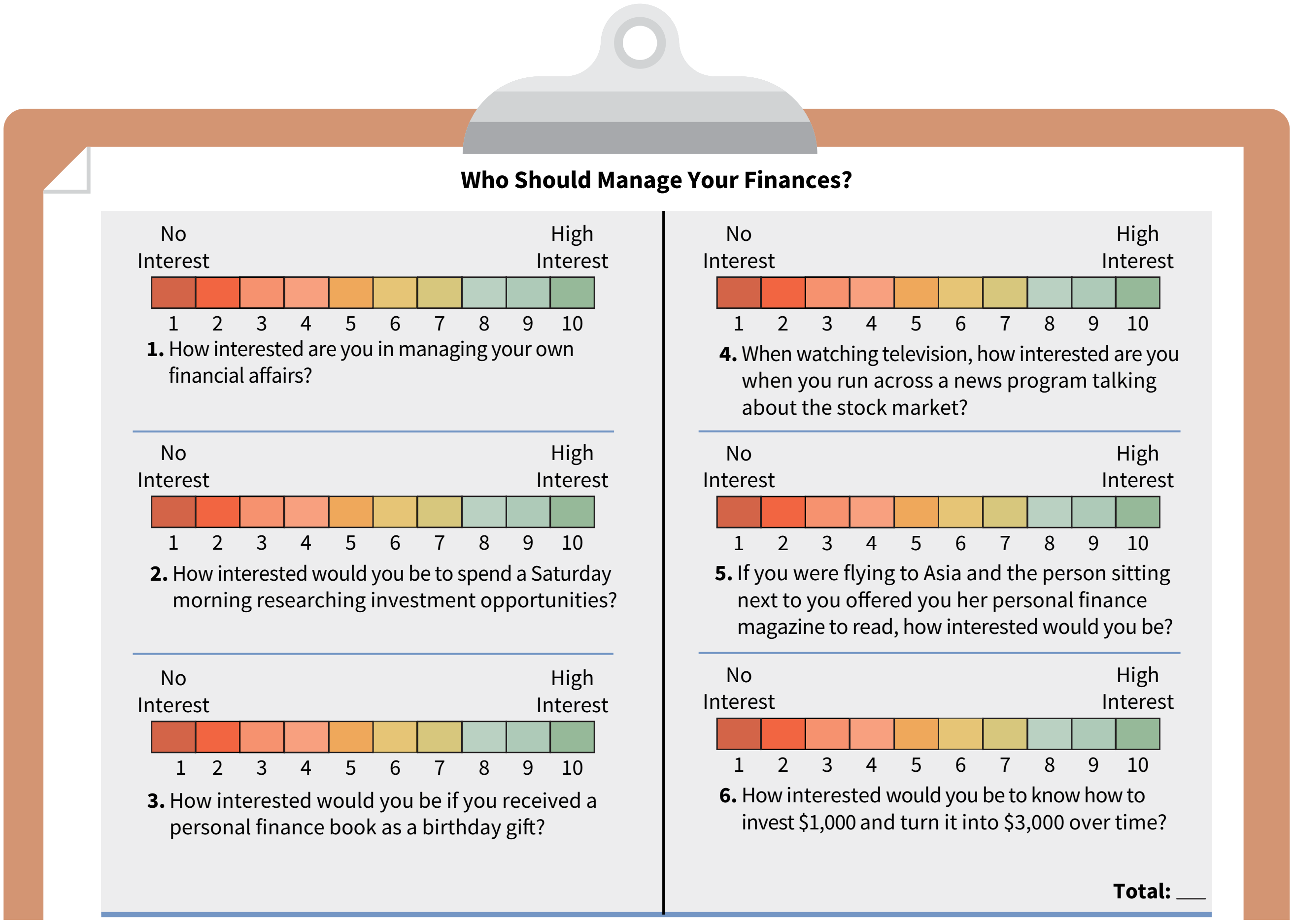
Taking Charge of Your Long-Term Future

Just as you learned to be proactive in managing your tax liabilities, it is now time to learn the benefits of being proactive in managing the care and distribution of your assets. For those who may think that the subject of creating a long-term wealth accumulation and estate plan is too complex, too dull, or simply too scary, this chapter includes a discussion about where to

[1]A. Ebeling, "Americans Lack Basic Estate Plans," *Forbes* (2010); http://www.forbes.com/2010/03/01/estate-tax-living-will-schiavo-personal-finance-no-estate-plans.html.

search for help and how to build a financial plan. We recognize that some people just do not want to craft and direct their own financial plan. That is totally understandable. Even the best physicians have their own doctors. This is one reason this chapter includes a section on finding a financial services professional. You will learn about financial planners, financial counselors, financial therapists, financial coaches, and others.

Before jumping into chapter details, let's have some fun. The following questionnaire is intended to help you decide if you should be the one creating your own financial plan or if you might be better off seeking the help of a financial services professional. Answer each question below by selecting a number on each scale that indicates your level of interest.



Add up your total score and divide by 6. Here is how to interpret your score:

- If you scored between 1 and 2.9, you should definitely consider hiring a financial services professional to help manage your household financial situation.
- If you scored between 3 and 5.9, you might consider interviewing a few financial services professionals to see if they might offer services that would be useful and affordable.
- If you scored between 6 and 8.9, you likely have enough interest and motivation to draft and implement your own financial plan.
- If you scored between 9 and 10, you ought to consider an academic major or career change. Not only do you have the passion to manage your own financial affairs, you might also be a great financial services professional yourself!

Finally, regardless of your score, remember that like most decisions, you can change your mind. Even if you don't have the confidence to go it alone right now, you may decide later to take the financial reins yourself. And understanding the topics in this chapter is a great start!

Planning for Your Retirement

LO 10.1 Discuss the need and responsibility for retirement planning.

When you were in high school, you may have used a last-minute study strategy. Sometime in college, you probably realized that if you kept up with your studies on a daily basis, you could avoid the cramming that can happen before an exam. By mindfully learning the material assigned by your instructor, you most likely achieved greater rewards (and higher grades). The key is to find a good balance between study, work, family, and free time.

Planning for your retirement is a similar exercise in balance. It may seem premature to think about retiring when you may not have yet graduated from college, but it really is never too early to start preparing for your future. Consider this: if you are heading out on a cross-country trip, you would probably like to know where you hope to end up. In terms of your lifetime financial journey, retirement is, for many, that ultimate destination. To make that end point a reality, you need to be mindful of your future. While government programs like Social Security help in retirement, the primary burden for your future rests with you. In this topic, we discuss how starting to plan and fund your retirement today can help you realize your later-life dreams.

Overview of Retirement Planning

Changes in Retirement Planning

There was a time when thinking—and worrying—about retirement was not a big deal. Two reasons help explain why your great-grandfather probably worried less about retirement than you ever will.

1. The average life expectancy in 1936 was 69.7 years. If most people retire at around age 65, it does not take a math wizard to figure out that your relative most likely only had to fund a few years of retirement (see **Helpful Hint**). Today, however, life expectancy is closer to 80 years. This means that you must generate income for a much longer period of time.
2. Many people in the past retired with a **pension plan** (such as a **defined benefit plan**), which provides a retiree with a guaranteed payment from his or her employer for the remainder of the retiree's life.

HELPFUL HINT

Normal retirement age for Social Security benefits for those born in 1960 or later is 67. The examples used in this chapter assume a retirement age of 65 because most people hope to retire early.

Unfortunately, the days of employer-provided guaranteed income for life are quickly disappearing. Take a look at the long-term declining trend of pension plans in **Illustration 10.1.1**. Over time, the number of firms offering a pension has declined significantly. As this trend is continuing today, you will most likely retire with no pension.

Instead, you will probably be offered a defined contribution plan.

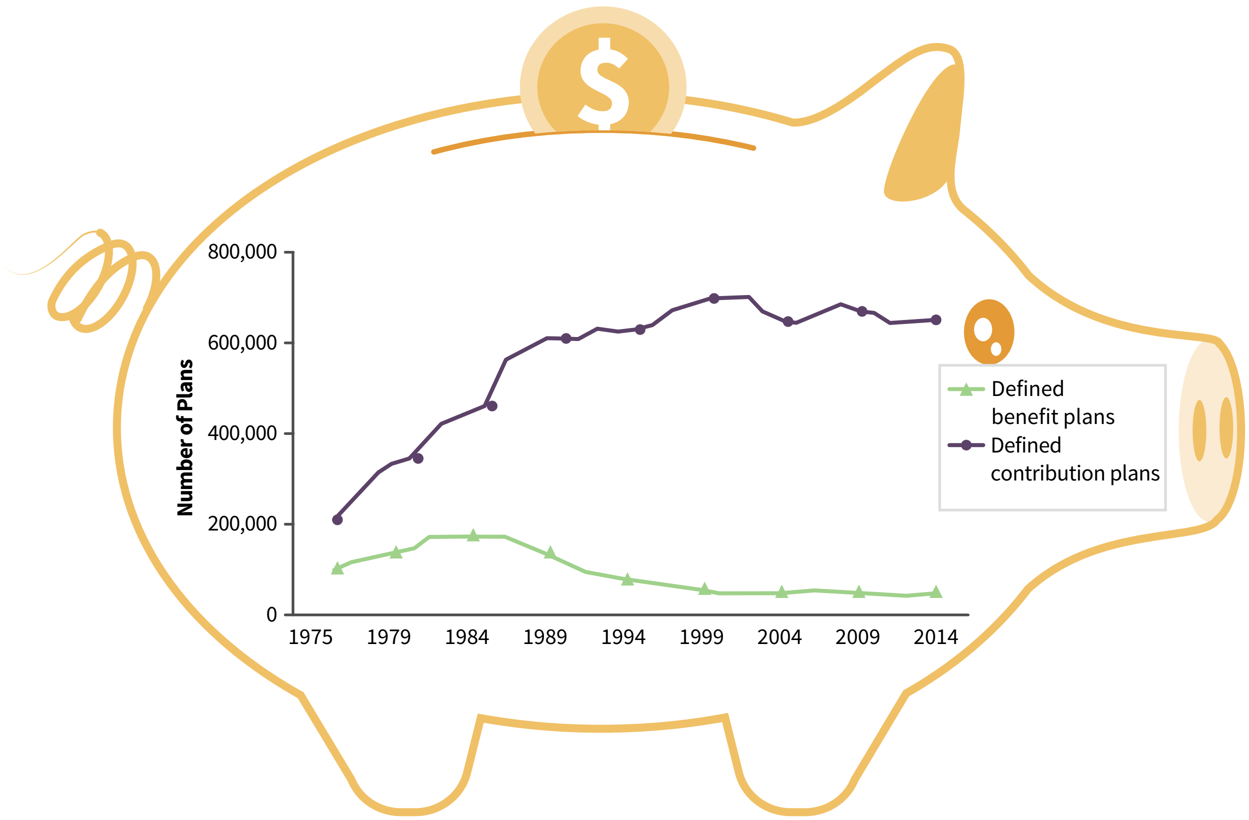
- A **defined contribution plan** sets how much you and your employer will deposit into your retirement account.
- There is no promise of what that money will be worth when you retire.

Planning Your Retirement

If you can't rely on a pension, what do you need to do to fund your retirement needs later in life? The answer is simple: you need to start saving money today. Logically, the next question is: what percentage of your income will you need to save each year to fund the expected duration of your retirement years? To answer this question, you need to break down the answer into two parts.

1. Estimate how much you will need on the day you retire to maintain your desired standard of living throughout your remaining life.
2. Estimate how much of your current income you should save each year to reach your financial goal.

ILLUSTRATION 10.1.1 **The Declining Number of Pension Plans in the United States**



Source: Department of Labor; https://www.dol.gov/sites/default/files/ebsa/researchers/statistics/retirement-bulletins/private-pension-plan-bulletin-historical-tables-and-graphs.pdf.

Estimating Your Financial Retirement Needs

To estimate your financial needs during retirement, you need to make a few calculations.[1] Let's look at these estimates next.

Career Average Income

What do you think your average income will be over your career? Think of this number in today's dollars. **Illustration 10.1.2** shows four incomes, representing typical U.S. salaries (the calculations in Illustration 10.1.2 factor in inflation and time value of money).

1. Below-median income: $23,000.
2. Median income: $50,000.
3. Above-median income (consistent with a college graduate): $78,000.
4. High-median income: $120,000.

Based on these numbers, you can estimate where you think you will be, on average, over your working years.

Wage Replacement Rate for Retirement Living

HELPFUL HINT

Every person should estimate his or her own wage replacement rate based on individual goals and circumstances.

Column B of Illustration 10.1.2 includes an estimated wage replacement rate. The **wage replacement rate** is a percentage, usually between 70% and 80%, which represents a consistent standard of living between pre- and postretirement. We have used 75% in the estimates in Illustration 10.1.2. Here are more details about the wage replacement rate (see **Helpful Hint**):

- The wage replacement rate is typically less than 100% because you won't need to replace all your income in retirement. For example, you will no longer be saving 15–20% of your

[1] Each of the calculations shown in this topic can be modified based on retiring at, before, or after age 65. For example, the retirement age for Social Security purposes is 67.

ILLUSTRATION 10.1.2 **Estimate of Total Amount of Savings Needed at Age 65 for Retirement (in current dollars)**

(A) Average Annual Career Income	(B) Wage Replacement Rate	(C) Income Replaced by Social Security[a]	(D) Percentage of Income You Need to Replace (B – C)	(E) Amount of Income You Need to Replace (A × D)	(F) Amount of Money Needed at Retirement (E ÷ 0.04)
1. $23,000	75%	44%	31%	$ 7,130	$ 178,250
2. $50,000	75%	32%	43%	$21,500	$ 537,500
3. $78,000	75%	27%	48%	$37,440	$ 936,000
4. $120,000	75%	21%	54%	$64,800	$1,620,000

[a] Social Security is designed to replace a larger percentage of lower-income workers' pay. Estimates for Social Security replacement rates were adapted from M. Clingman, K. Burkhalter, and C. Chaplain, *Replacement Rates for Hypothetical Retired Workers* (ACTUARIAL NOTE Number 2014.9) (Baltimore, MD: Social Security Administration, 2014).

income for retirement. You will also not be paying FICA taxes (7.65%) or have work-related expenses (e.g., buying work clothes and commuting). Depending on where you live, you may have also paid off your mortgage and other debts by the time you retire.

- All these items, added together, suggest that you will have fewer financial outlays during retirement. However, some expenses will increase, like medical and travel. The actual increase will be different for everyone.

Social Security

Column C of Illustration 10.1.2 shows an estimate of what you can expect in terms of an annual benefit from Social Security. The figure represents the percentage of your current income that will be replaced through Social Security. Here's a quick review of Social Security.

- Social Security was implemented in 1937 and paid retirees, over age 65, a basic retirement income benefit. The Social Security program is a **pay-as-you-go system**, meaning that current taxes fund the vast majority of the current retirement benefits paid to retirees.
- Benefits are based on a formula designed to replace a certain percentage of your lifetime income (highest 35 years of earnings adjusted for wage growth). The more you earn, the less your income will be replaced by Social Security. Social Security is a supplemental program, not a comprehensive benefit.
- Even though you might hear that Social Security will be "bankrupt" in a few years, this is unlikely because there will still be workers paying taxes into the system. Instead, the system will probably not be able to pay full benefits as promised. According to the **Social Security Administration**, retirees may only receive approximately $0.75 for every dollar of benefits promised (see **Helpful Hint**).
- Reduced Social Security retirement benefits can be claimed as early as age 62. For most individuals working today, full Social Security retirement benefits start at age 67.

HELPFUL HINT

You can check your estimated Social Security benefit at the Social Security Administration website.

In addition to your Social Security retirement benefit and your personal wealth, your health will be a factor that determines when you retire.

Your Responsibility

Column D of Illustration 10.1.2 shows the estimate of that portion of your retirement income that Social Security will not provide. If you then multiply that percentage by your average career income (Column A × Column D), you can estimate the amount of retirement income that will need to be generated from your own savings.

The bottom line question is this: how much money will you need at retirement to generate the income shown in Column F of Illustration 10.1.2?

- The answer can be calculated by dividing the income you need to generate by 4% (Column E ÷ 0.04) (see **Helpful Hint**).

HELPFUL HINT

A 4% withdrawal rate from your portfolio is a common guideline that financial planners use when advising retirees.

- The last thing you want is to run out of money in the middle of your retirement years. The 4% guideline helps ensure that your money lasts as long as you do. If you want even less risk of running out of money, use a smaller number such as 3.5%.

Remember, these numbers are shown in current dollars. This means that if you currently earn $23,000 and also have $178,250 or more in retirement savings, you are on track to meet your retirement goal and don't need to save any more for retirement. This implies, of course, that you will continue to work until at least age 65 and earn a reasonable rate of return on your investments over time.

Saving for Retirement

Now that you have an idea of how much you need to save to fund your retirement, you can estimate how much you should be saving out of each paycheck to reach your retirement goal.

Required Retirement Savings Rate

Illustration 10.1.3 provides examples of required retirement saving rate estimates based on the numbers from Illustration 10.1.2. A **retirement savings rate** is just the percentage of your income that you need to put aside for retirement.

ILLUSTRATION 10.1.3

Required Savings Rate for Various Retirement Needs and Starting Ages (in current dollars)

Amount Needed at Retirement	Average Career Income	Required Retirement Savings Rate to Reach Retirement Goal[a]		
		Start Saving at Age 25	Start Saving at Age 35	Start Saving at Age 45
$178,250	$23,000	7.2%	12.7%	24.7%
$537,500	$50,000	10.0%	17.6%	34.3%
$936,000	$78,000	11.2%	19.7%	38.3%
$1,620,000	$120,000	12.6%	22.1%	43.0%

[a] Assumes that the individual has not yet saved any money for retirement, plans to retire at age 65, and will realize a real rate of return on investments of 4.5%.

HELPFUL HINT

Don't let these numbers scare you. You can take advantage of employer-defined contribution plans (discussed later), as well as other retirement savings options to help you reach your retirement goals.

The savings rates shown in Illustration 10.1.3 may shock you, especially if you are older. Here are some takeaways from the illustration (see **Helpful Hint**):

- If you expect to have average career earnings of about $78,000 and plan to start saving for retirement when you are 25, you will only need to save a little more than 11% of your income until age 65 to reach your retirement goal.
- However, if you wait to start saving for retirement until age 45, then you will need to save more than 38% of your annual income until age 65!
- If you want to retire early, start saving at age 25 but use a savings rate as if you were starting at age 35.

As you can see, it pays to start saving early for your retirement!

Retirement and Savings Income Lifecycle

HELPFUL HINT

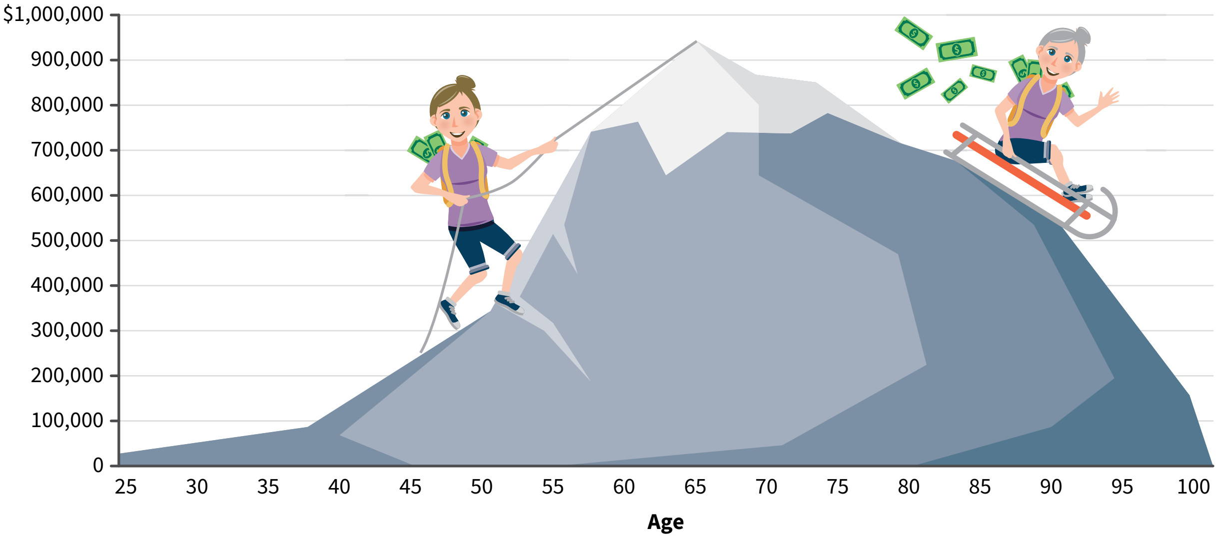
If you stay proactive with managing the percentage of income needed to be saved, you should stay on track no matter what your income later in life turns out to be.

Illustration 10.1.4 shows how savings are accumulated over your working life and eventually distributed during your retirement years. Note that as your income increases, the actual dollar amount you need to save will increase as well, but your retirement savings rate will remain a relatively constant percentage of your income (see **Helpful Hint**).

Let's look at an example. The dollar amounts in Illustration 10.1.4 show what the retirement and savings income lifecycle situation looks like for Kelly, who is just entering the workforce.

- As Kelly saves from age 25 to age 65 during her working life, the value of her retirement account grows.
- Around age 65, her assets peak and then slowly fall as she uses her savings to fund retirement income needs.
- In this illustration, Kelly's assets last to about age 100.

ILLUSTRATION 10.1.4 **Accumulation and Distribution of Retirement Assets over the Lifecycle (in current dollars)**



In actuality, Kelly's retirement accumulation and distribution path will not be this smooth and predictable. She must account for the following factors:

- Investment returns could be higher or lower than expected. This means that Kelly may need to adjust her savings up or down based on the performance of her investments.
- During retirement, Kelly may also need to pull less from her investment accounts if her investments perform poorly. If she does not make adjustments, she could run out of money before age 100 in retirement.
- If Kelly lives a lot longer than expected, she could run out of money. This is known as **longevity risk**.
- Remember that the opposite of all these statements could also happen. Kelly could be pleasantly surprised with the amount of money she has in retirement and have a large surplus of assets remaining at the time of her death.

Getting Your Employer's Help: Matching Contributions

Fear and confusion are common reactions among people who look at the numbers in Illustrations 10.1.2 and 10.1.3. Some of this fear is justified.

- According to the **National Institute of Retirement Security**, the average household in the United States has little saved for retirement. The median retirement account balance is less than $10,000.
- Worse still, for those nearing retirement age, the median savings is only $12,000.

Don't panic though. Regardless of your age, you can start to take steps today to make sure that you are well above the median savings amount. A good place to start is with an employer-sponsored retirement plan.

Defined Contribution Plans

As mentioned previously, many companies offer their employees the opportunity to participate in a defined contribution plan. Unlike a pension plan that is funded by an employer, a defined contribution plan is a retirement account that is funded primarily by the employee (you). If your employer provides such a plan, you should definitely consider participating.

- Some plans, for instance, will match your contribution using a predetermined formula based on the amount you contribute to the plan. Let's say that your employer offers a 100% match on the first 6% of your pay contributed to the plan. This means that if you put in 6%, your

HELPFUL HINT

Employees can also choose to have contributions taxed now and then enjoy partially tax-free distributions from the plan in retirement. These types of plans are commonly referred to as "Roth 401(E)" plans.

employer will also put in 6% for a total contribution of 12% of your pay. If you start early and take advantage of the match, you will be on your way to reaching your retirement goal.

- Some employers require employees to work a certain amount of time before the employee has unconditional rights to the employer contributions; this is referred to as **vesting**.
- Employee and employer contributions are excluded from current taxable income. Instead, the retirement distributions are taxed in the future (see **Helpful Hint**).
- Some employers do not offer retirement plans. If this is the case for you, you should open traditional or Roth IRAs to save for retirement. (IRAs are covered in another topic.)

Defined contribution plans have specific titles depending on the type of company or organization where you work. The most common types of defined contribution plans are shown in **Illustration 10.1.5**. As indicated, all the plans shown in Illustration 10.1.5 are similar in function and purpose, but there are some differences among them.

ILLUSTRATION 10.1.5

Four Common Types of Defined Contribution Plans

401(k)	403(b)	457(b)	Thrift Savings Plan
• Plan where employees have individual accounts to which the employee, employer, or both make contributions.	• Like a 401(k) but plan designed for public education and not-for-profit entities.	• Like a 401(k) but plan normally open to all employees working for a state or local government.	• Like a 401(k) but plan open to employees of the federal government.
• Benefits are based on contributions and investment returns (gains and losses) on the accounts.	• Both the plan sponsor and employees can make pretax contributions.	• Both the plan sponsor and participants are permitted to make pretax contributions.	• Benefits are based on contributions and investment returns (gains and losses) on the accounts.

Source: *Retirement Savings: Better Information and Sponsor Guidance Could Improve Oversight and Reduce Fees for Participants* (GAO-09-641, September 2009).

HELPFUL HINT

If you are self-employed, you can also set up a 401(k) plan for yourself and business. Since you are the employer, you would also be matching your own contribution.

It is also worth noting that retirement plan laws can get quite complex. It is possible, for example, that your employer might offer one or more of the plans shown in Illustration 10.1.5. You may also see hybrid plans that combine aspects of pretax and after-tax contributions. Regardless of which plan you may qualify for, if you have the option, you should definitely sign up for a defined contribution plan (see **Helpful Hint**). Here are a few benefits you will receive when you sign up for one of the plans shown in Illustration 10.1.5:

- Every dollar you contribute to the plan will reduce your taxable income today.
- The majority of employers provide matching contributions for those who participate in a plan, such as 50% of every dollar that an employee contributes (or 100% of every dollar contributed), often up to a maximum match of some percentage of your pay.
    - ◆ This means that if you earn $50,000 a year and put in $3,000 (6% of your current pay), your employer will also contribute $1,500 to your retirement account. This is quite a return on your investment!
    - ◆ When considering job options, you should ask if the company offers a retirement plan and what the matching contribution is. Generous employer matches could be more lucrative than slightly higher pay over the long term.
- All the money that goes into your account grows **tax-deferred**, which means that you will only owe taxes when you begin to take distributions from the account.

Keep in mind that under current law, you must start to withdraw from a retirement account when you are 70½ years old.

- These obligatory withdrawals are referred to as **required minimum distributions (RMDs)**.
- RMDs continue for the duration of the account holder's life, or until all the account is distributed.
- If an RMD is not taken, there is a 50% tax on undistributed RMD amounts.

If you take money from your account earlier than age 59½, you will generally pay a 10% penalty and income tax on the distribution. This means that you should only use a defined contribution plan for retirement saving purposes.

Investing Retirement Funds

Nearly all defined contribution retirement plans require you to select investments within the defined contribution account. Here are some things to consider (see **Helpful Hint**):

- You need to invest your retirement money to earn a rate of return that is approximately 4 to 5 percentage points higher than the rate of inflation. For example, if inflation is averaging 3%, you need to earn a 7–9% rate of return on your retirement plan investments.
- Mutual funds, including target date funds, tend to be the most common investment choices in most plans.

HELPFUL HINT

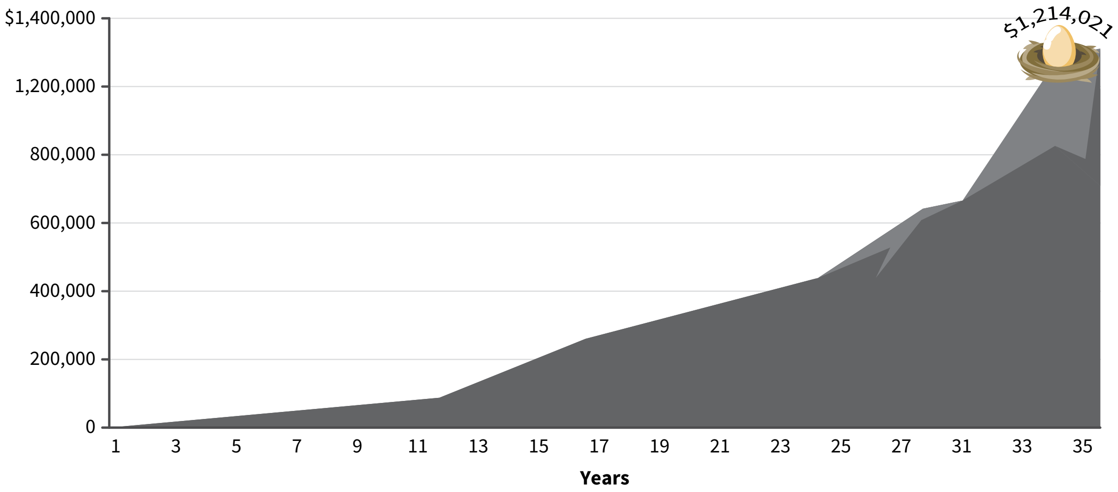
When selecting the investments within your employer-sponsored retirement plan, be sure to choose mutual funds that match your financial goals, time horizon, and risk tolerance.

If you use your employer-sponsored retirement plan wisely, you may be able to retire earlier, be less dependent on Social Security, or simply have some additional assets to use later in life. Let's see how saving on a regular basis can really add up over time. Consider the case of Javier.

- He is 30 years old and earns $70,000 per year.
- He plans to retire at age 65.
- He will contribute 6% of his income into his 401(k) plan.
- His employer will match 3% of his income into his 401(k) plan, so a total of 9% of his income will be contributed to the retirement savings plan.
- He expects an 8.5% return on his investments per year.

As shown in **Illustration 10.1.6**, if Javier sticks to his plan and saves just 6% of his income (and his employer matches his savings with another 3% of his income) for the next 35 years, he will end up with $1,214,021 in savings (calculated using the future value of an annuity formula). Not a bad nest egg considering he will never have contributed more than $4,200 toward his retirement in any one year.

ILLUSTRATION 10.1.6 **Example of Growth of Retirement Savings over Time**



Concepts in Action

Narita just graduated from college and has started working at her new job. She will earn $40,000 a year. She also has some credit card debt and student loan debt that she needs to repay. Narita's employer offers a 401(k) plan. Her employer offers a matching contribution of 50% of her contribution, up to a maximum match equal to 3% of her pay.

There are a variety of different mutual funds and other investments available in the 401(k) plan. Narita has three important decisions to make: (1) should she contribute to the 401(k) plan considering that she has debt to repay; (2) if she does contribute, how much of her pay should she contribute; and (3) how should she invest the money? Help Narita answer these questions.

Solution

1. Narita should definitely participate in her employer's plan. Some may argue that Narita should pay off her debt first, but unless the interest rate on her debt is more than 50% (the match rate

on her 401(k) contributions), she will be better off financially by contributing to her employer's retirement plan and paying off her debt at the same time.

2. How much of her pay should Narita save? Using Illustration 10.1.3, if Narita thinks her earnings now will be about the same or a little higher over her career, then she is close to the amount needed to reach her retirement goal. Her current income is less than this, but over time her income will likely increase faster than the rate of inflation (because she is a college grad) to get her to $50,000. Her annual savings rate should be at least 10%. If Narita saves 10% of her income, her employer will match her contribution with an additional amount equal to the lesser of 50% of her contribution or 3% of her pay, which is $1,200 (3% × $40,000). This will give Narita a total retirement savings rate of 13%. Narita could also choose to save 7% of her pay and still receive the maximum match of 3% of her pay, which would bring her total retirement savings rate up to 10%. Over time, Narita should strive to save as much of the suggested retirement savings rate on her own as possible, so that her employer match can act as a protection against uncertainty and also provide the opportunity to potentially retire early.

3. The simplest investment strategy for Narita involves purchasing a low-cost (i.e., low expense ratio) target date mutual fund with a retirement date closest to her expected retirement date. Nearly all employer-sponsored retirement plans offer target date funds. Recall that a target date fund will provide a diversified portfolio with an age-adjusting asset allocation.

End-of-Topic Assessment

Multiple-Choice Questions

1. All of the following are true about life expectancy today, *except*:
   - **a.** most people will need to generate income for longer periods of time than in the past.
   - **b.** retirees have to plan for many more years in retirement than in the past.
   - **c.** life expectancy is close to 80 years today.
   - **d.** the number of years in retirement is about the same as it was in 1930.

2. What is the difference between defined benefit plans and defined contribution plans?
   - **a.** Defined benefit plans and defined contribution plans are both pension plans.
   - **b.** Defined benefit plans guarantee payments to retirees, whereas defined contribution plans make contributions to retiree accounts without making guarantees.
   - **c.** Defined contribution plans are pensions and defined benefit plans are not.
   - **d.** Defined contribution plans require employees to save less for retirement, whereas defined benefit plans require employees to save more.

3. A _______________ plan provides a guaranteed payment from an employer for life, whereas a _______________ plan provides a benefit based on the value of contributions to the account and investment returns.
   - **a.** defined contribution; defined benefit
   - **b.** 401(k); 403(b)
   - **c.** defined benefit; defined contribution
   - **d.** 401(k); 403(b) or 457

4. You should start to calculate your retirement need when:
   - **a.** you will retire in a few years.
   - **b.** you have just retired.
   - **c.** you are older than 55.
   - **d.** It's always important, regardless of age.

5. Employer-sponsored retirement plans that are funded primarily by the *employee* are:
   - **a.** 457 plans.
   - **b.** 401(k) plans.
   - **c.** 403(b) plans.
   - **d.** 457 plans, 403(b) plans, and 401(k) plans.

6. Longevity risk is the risk that you will:
   - **a.** live beyond 90 years of age.
   - **b.** live too long.
   - **c.** run out of money just after retirement.
   - **d.** outlive your savings.

7. Why do 401(k) plan sponsors match employee deferrals?
   - **I.** It is the right thing to do for employees.
   - **II.** Employer-matching contributions are employee benefits made to encourage productivity and loyalty.
   - **III.** 401(k) plan sponsors match employee deferrals because they can get a tax deduction that reduces the taxes they will pay.
   - **IV.** Employees expect their plan sponsor to make matching contributions when they participate in the plan.
     - **a.** II and III only.
     - **b.** I and II only.

c. II and IV only.

d. I, II, and IV only.

8. Which of the following is *true* regarding 401(k) plans?

I. 401(k) plans are primarily funded by employees.

II. 401(k) plans are primarily funded by employers.

III. Investments grow tax-deferred in 401(k) plans.

IV. Employers may provide matching contributions to 401(k) plans.

a. I, II, and IV only.

b. I, II, and III only.

c. I, III, and IV only.

d. I and II only.

9. Which of the following retirement plans is sponsored by not-for-profit organizations?

a. 401(k) plans.

b. 403(b) plans.

c. Thrift savings plan.

d. Roth IRAs.

10. In what ways are 401(k) plans, 403(b) plans, and 457 plans similar?

a. They are identical except for the type of employer who may sponsor them.

b. They are each primarily funded by employer contributions.

c. They are all considered pension plans.

d. They each provide employees tax-advantaged opportunities to save for retirement.

Adventures in Personal Finance

Short Answer

1. **Calculate** Lennox is 33 years old and graduated from college about 8 years ago. He struggled after college to find work that was fulfilling to him and also paid a sufficient salary. He has now been in his current job for 2 years and loves it. He earns $55,000 per year, with several opportunities to increase his income. Lennox definitely wants to retire by age 67. His employer provides a 100% match on employee 401(k) contributions up to 5% of the employee's pay. Using Illustration 10.1.3, what percentage of Lennox's income should he be contributing to the 401(k) plan each year?

2. **Calculate** Sue has just started working after college. She earns $45,000 a year and is 25 years old. She expects her lifetime earnings to average about $65,000 a year. She would like to retire by age 55 if possible but definitely before age 60. Using Illustration 10.1.3, estimate Sue's retirement savings rate necessary to achieve her goal.

3. Jeff started working for a great small business in his hometown. He likes the atmosphere and the opportunity to grow the business. Jeff's employer does not offer a retirement plan through work. What are Jeff's best options to start saving for retirement?

4. Maria is self-employed and would like to start saving for retirement. Can Maria establish a 401(k) plan for herself as part of her small business?

Explore

1. **Calculate** You can begin taking steps to prepare for retirement right now. Let's say you have a tight budget that does not allow a maximum contribution to a defined contribution plan, but you can save $5,500 per year into a plan. How much will you accumulate at age 55 if you start saving at age 25 and can earn a 9% annualized rate of return on your investments? How much will the account be worth if you continue contributing until you reach age 65?

2. **Presentation** Contact three financial services companies, including your bank or credit union. Find out whether they offer IRAs, what types of investments you can make within the IRA, and what fees are charged for having an IRA. Develop a table with the three different companies listed in the first column and the IRA characteristics as headings going across the first row. Now compare the IRA offerings with a typical 401(k) plan. If you do not have a job that offers a defined contribution plan, visit the website of any large firm (**Microsoft**, **Google**, **Proctor & Gamble**, etc.) and review their 401(k) plan. Share your findings with your classmates.

Expanded Learning Activity

Writing Many employers offer retirement plans. Think of the top three companies that you want to work for after you graduate. Go online and see if you can find out whether any of these three companies offer matching contributions to retirement plans and, if so, the amount of the match. Write a short paragraph comparing the companies' retirement plans and whether that changed your ranking of which company you want to work for the most.

Individual Retirement Accounts (IRAs)

LO 10.2 Explain how to use individual retirement accounts (IRAs) to save for the future.

An important milestone in your lifetime financial journey is reaching a point when you can stop working for pay and begin new adventures on your own time schedule, based on your own interests. Some refer to this as *financial independence*; others call it *retirement*. As you begin saving and preparing for your retirement, you will be faced with a daily conflict. To reach your future financial goals, you will most likely need to sacrifice some things today. This is, after all, the moral of Aesop's fable about the tortoise and the hare. In that story, the tortoise, while moving slowly but consistently, outperformed the hare, even though the hare was faster and more agile. The same is true when it comes to planning for your retirement. Ongoing and consistent retirement savings, starting at the beginning of your career and continuing thereafter, is the best way to reach your retirement goals.

Employer-sponsored retirement plans can help you move along the road to reaching your financial goals. Unfortunately, not everyone has access to this type of retirement savings plan. Some may work part-time, be an independent contractor, or work for an employer too small to offer many employee benefits. Fortunately, there are retirement accounts that are available to these individuals that provide many of the same tax advantages as employer-sponsored retirement plans. In this topic, we discuss these personal retirement savings plans, known as individual retirement accounts (IRAs).

Overview of IRAs

HELPFUL HINT

You must be older than 18 years of age, have an adjusted gross income of less than $30,000, and not be a full-time student to qualify for the Retirement Saver's credit.

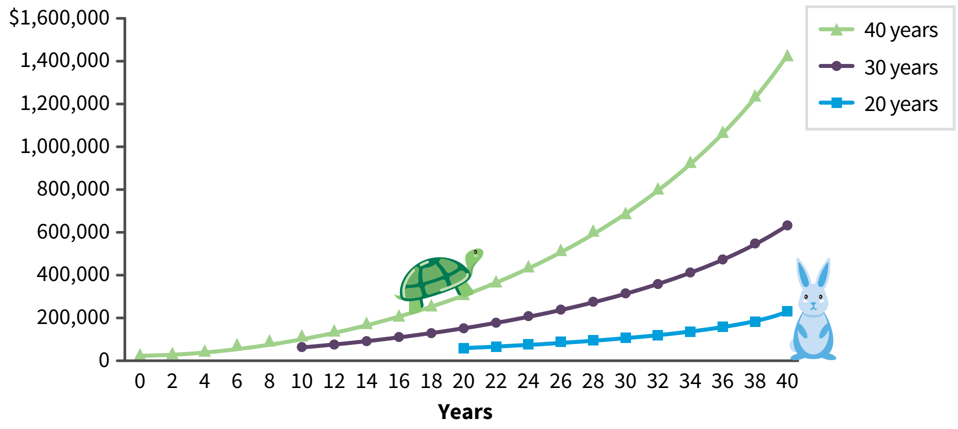
Individual retirement accounts (IRAs) (sometimes referred to as individual retirement arrangements) are retirement savings accounts that provide individuals with:

- Valuable tax benefits.
- Asset protection from creditors.
- Access to retirement savings in the event of certain emergencies.
- Eligibility for an additional $1,000 tax credit (the **Retirement Saver's Credit**) (see **Helpful Hint**).
- Ability to make contributions for a tax year until the due date of the tax return for that year.

Because all money in an IRA grows on a tax-deferred basis, it is possible to accumulate significant wealth with a modest annual contribution. **Illustration 10.2.1** shows what an IRA

ILLUSTRATION 10.2.1

Example of IRA Wealth Accumulation over Time



would be worth if $5,500 were contributed to the account annually for 40 years, 30 years, or 20 years, at an average annual rate of return of 8%.

There are two types of IRAs that you can establish:

1. Traditional IRA.
2. Roth IRA.

Let's look at these two options in more detail.

Traditional IRAs

Traditional IRAs allow you to claim a **tax deduction**, if you qualify, on your federal tax return for the amount of the contribution.

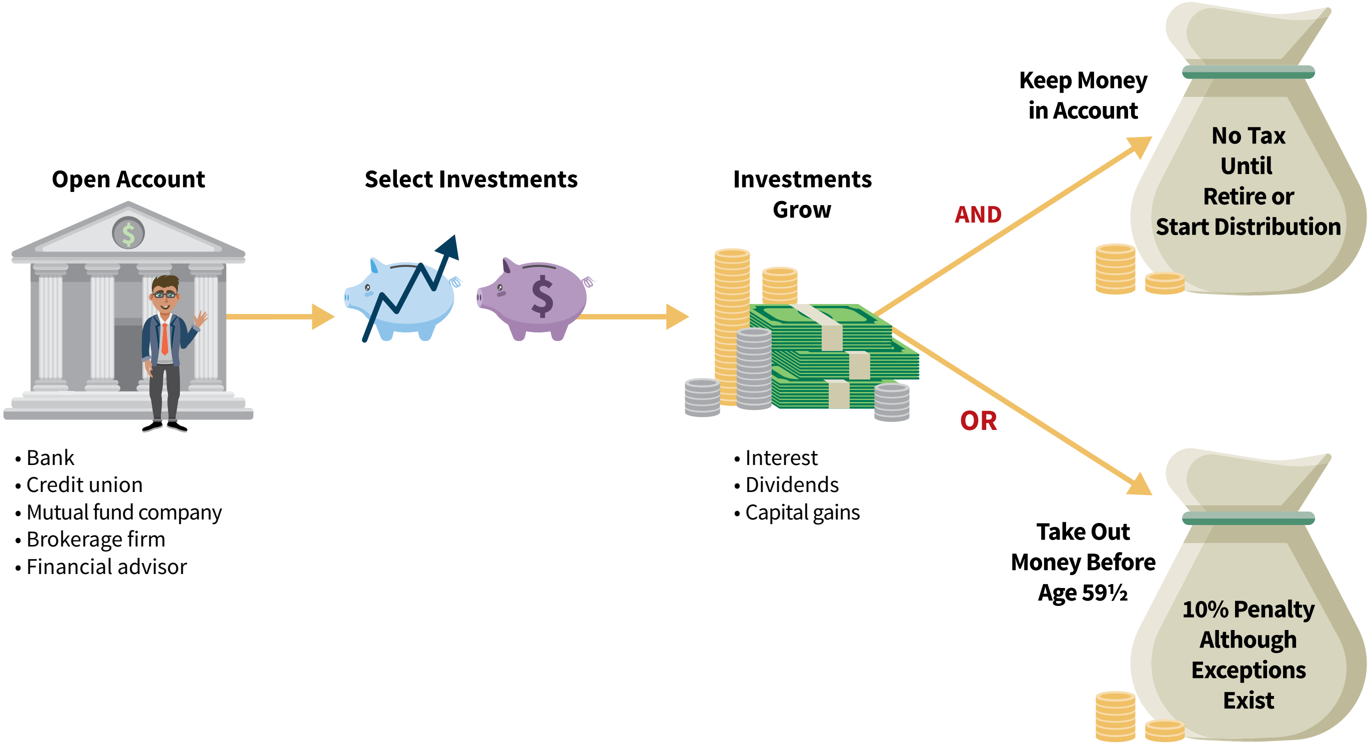
- If you do not have access to an employer-provided retirement plan, then 100% of your IRA contribution may be deducted from your federal income tax return.
- Individuals participating in an employer-sponsored retirement plan may also be able to deduct contributions to a traditional IRA, but the amount may be limited based on income (see **Helpful Hint**).

HELPFUL HINT

See *IRS Publication 590-A* at the IRS website to find out if your ability to deduct a traditional IRA is limited.

Illustration 10.2.2 shows how the traditional IRA funding process works.

ILLUSTRATION 10.2.2 **Traditional IRA Funding Process**



1. You open an account with a bank, credit union, mutual fund company, brokerage firm, or financial advisor.
2. You select the investments in the account.
3. The earnings from the investments, usually in the form of interest, dividends, or capital gains, accumulate in the account on a tax-deferred basis.
4. If you keep the earnings in the account, you will not be taxed until you retire or begin taking distributions. Keep in mind that you must begin taking IRA distributions no later than age 70½. However, if any money is taken from a traditional IRA account before age 59½, then a 10% penalty will generally be assessed by the **Internal Revenue Service (IRS)**. Exceptions to the 10% penalty exist, for example, if the money is used for the purchase of a new

home, to fund qualified education expenses, because of death or disability, to pay health insurance premiums while unemployed, if you take substantially equal periodic payments, or if you roll the money over to another retirement account.

5. When you take money out of the account during retirement, all the distribution will be taxed as ordinary income in that year (if you claimed a tax deduction when you made the original contribution). That is, traditional IRA owners often get a tax deduction in the year they contribute to the account, but they end up paying taxes on that money in the future when it is pulled out in retirement. However, as long as the money is left in the IRA, none of the investment income is taxable. This is what is meant by the term **tax-deferral**.

ILLUSTRATION 10.2.3

The Tax Status of Lamar's Traditional IRA

1 **Tax Deduction for Money Contributed:**
$5,000 deductible contribution saves $1,100 in taxes (net after-tax cost is $3,900).

2 **Contribution + Earnings Grow Tax-Deferred:**
$175,000 in contributions + $516,184 in earnings.

3 **Distributions Fully Taxable:**
Account value at the end of 35 years is $691,184; tax on distributions is $152,060.

To illustrate how a traditional IRA works (see **Illustration 10.2.3**), consider Lamar. Lamar is 30 years old, single, and is in the 22% federal marginal income tax bracket. His employer does not offer a retirement plan.

- If Lamar makes a $5,000 contribution to a traditional IRA, Lamar will receive a tax deduction this year.
- The deduction is worth $1,100 ($5,000 × 22%).
- This means the after-tax cost of contributing is only $3,900 ($5,000 – $1,100).
- However, the full $5,000 goes into the account and grows based on the account's investment returns. If Lamar contributes $175,000 ($5,000 × 35 years) by the time he retires at age 65, because of the tax deductions Lamar received, the after-tax cost of his contributions will be only $136,500 ($3,900 × 35).[1]

Let's say that Lamar can earn 7% on an annualized basis. At the end of 35 years, the account will be worth $691,184 (calculated using the future value of an annuity formula). Remember that Lamar will need to pay tax on this money when he makes withdrawals from the account. If Lamar is in the 22% marginal tax bracket in retirement, then he will pay a 22% tax on the money pulled out, or $152,060 ($691,184 × 0.22). Lamar's after-tax wealth will be $539,124 ($691,184 – $152,060).

Roth IRAs

Roth IRAs are similar to traditional IRAs (you get to choose the investments in the account, and the earnings within the Roth IRA are tax-deferred, like a traditional IRA). The difference is that Roth IRAs provide you with a different tax outcome. If certain conditions are met, all the money distributed from the account (earnings and contributions) will be tax-exempt. This means that money you pull from a Roth IRA in retirement is tax-free to you. Qualifying distributions from Roth IRAs are tax-free if both of the following conditions are met:

1. The account has been open longer than 5 years.
2. The account owner is older than age 59½ when the distribution is made, or the owner of the account has become disabled or died.

HELPFUL HINT

Penalties and tax apply to nonqualified distributions of *account earnings* but do not apply to amounts contributed and later distributed.

The ability to withdraw principal from a Roth IRA without paying taxes makes these accounts an attractive option for those adding to an emergency savings fund or saving for a child's education. For example, you may withdraw all your own contributions to a Roth IRA at any time without penalty or taxation (see **Helpful Hint**).

[1]Each of the calculations shown in this topic can be modified based on retiring at, before, or after age 65. For example, the normal retirement age for Social Security purposes is 67.

Let's now look at how a Roth IRA works using the same example and information as above. Lamar is still single, 30 years old, and is in the 22% federal marginal income tax bracket, but he now decides to contribute to a Roth IRA instead of a traditional IRA (see **Illustration 10.2.4**).

- If Lamar contributes to a Roth IRA, he is not able to claim a tax deduction today.
- Lamar decides that he can only afford to contribute $3,900 (the after-tax cost of his traditional IRA contribution); just like a traditional IRA, the account grows on a tax-deferred basis.
- If the account earns 7% on an annualized basis, Lamar will have $539,124 in the account after 35 years (calculated using the future value of an annuity formula).
- The total amount that Lamar has contributed to the Roth IRA will be $136,500 ($3,900 × 35 years). The after-tax amount is the same because Lamar did not receive a tax deduction for these contributions.
- *The difference is that all distributions from the account can be taken on a tax-free basis.* Thus, Lamar's after-tax wealth will be $539,124.

ILLUSTRATION 10.2.4

The Tax Status of Lamar's Roth IRAs

1 **After-Tax Money Used for Contribution:** $3,900 contribution (equivalent after-tax contributions to the traditional IRA).

2 **Contribution + Earnings Grow Tax-Deferred:** $136,500 in total contributions + $402,624 in earnings.

3 **Distributions May Be Tax-Free:** Account value at the end of 35 years is $539,124; distributions from the account are tax-free.

Illustration 10.2.5 shows a comparison of Lamar's two choices. As shown, if Lamar is in the same marginal tax bracket in retirement that he is in today, then Lamar's after-tax wealth will be the same, $539,124 (see **Helpful Hint**).

ILLUSTRATION 10.2.5

A Comparison of Lamar's IRA Choices

	Traditional IRA	Roth IRA
Marginal tax bracket rate now	22%	22%
Pretax contribution	$ 5,000	$ 3,900
After-tax contribution	$ 3,900	$ 3,900
Number of years contributing	35	35
Rate of return	7.0%	7.0%
Balance after 35 years	$ 691,184	$ 539,124
Marginal tax bracket rate in retirement	22%	22%
Tax on distributions	$ 152,060	$ 0
After-tax amount of distributions	**$539,124**	**$539,124**

HELPFUL HINT

If Lamar's tax rate goes up in retirement, the Roth IRA will create more after-tax wealth.

There are lots of factors that can change the look of the accumulation and distribution table, the most significant is whether you will have a lower or higher marginal tax rate at retirement than you have now. For that reason, to help you make the choice between these two types of IRAs, consider the rules shown in **Illustration 10.2.6**.

ILLUSTRATION 10.2.6

IRA Choice Rules

Roth IRA	• If your marginal tax rate in retirement is going to be higher than it is today, then a Roth IRA would likely be better.
Traditional IRA	• If your marginal tax rate in retirement will be less than your current tax rate (say that you are in your peak earning years today), then you would likely be better off contributing to a traditional IRA.
Roth IRA	• If you are younger than age 30 and your investment portfolio is at least 60% stock, then as a general rule you are likely better off contributing to a Roth IRA and receiving the tax-free income in retirement.

IRA Contributions

IRA Contribution Requirements

Contributions to either a traditional or Roth IRA have some requirements and limitations.

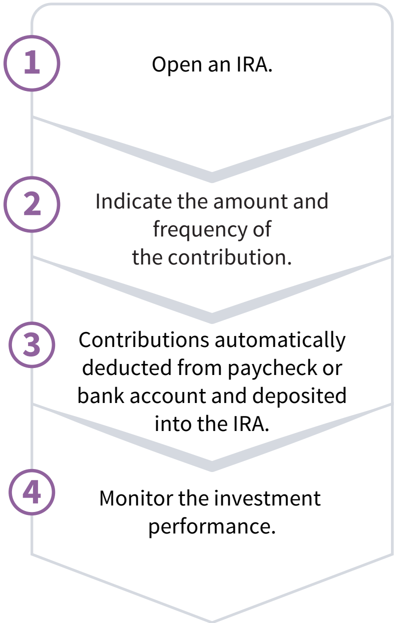
- You need to have **earned income**. The IRS defines earned income as money received from working or operating your own business. Examples of earned income include wages, salaries, tips, and net earnings from self-employment. Unearned income includes interest, dividends, Social Security, child support, and capital gains.
- You can contribute to both a traditional and Roth IRA in one year, just so long as the combined total contribution is less than the annual limit ($5,500 or $6,500 for those older than age 50 in 2018) (see **Helpful Hint**).
- Recall that if you are covered by an employer-sponsored retirement plan, such as a 401(k) or 403(b) plan, you may not be able to claim a tax deduction for traditional IRA contributions.
- If your income is above a certain amount, you cannot contribute to Roth IRA accounts.
- You need to be younger than 70½ years old to make a traditional IRA contribution.

HELPFUL HINT

No matter how many IRAs you have, you are capped on your maximum annual contribution.

ILLUSTRATION 10.2.7

The Process of Automating Retirement Savings



Automating Contributions

If you do not have the luxury of funding an employer-provided retirement plan, in which contributions are automatically deducted from your paycheck, you need to develop a plan to automate savings yourself. As shown in **Illustration 10.2.7**, the process is easy.

1. Start by finding a mutual fund that you want to invest in (many allow you to start with as little as $250), or you can open a brokerage account online (as an IRA).
2. On the application form, simply indicate the amount and timing of your future contributions. For example, you could indicate your desire to contribute $250 each month.
3. Once the application is processed by the mutual fund company or brokerage firm, your contribution amount will automatically be deducted from your paycheck or bank account and directly deposited into your IRA account. If your IRA's mutual fund generates an average annual return of 7% and you make monthly contributions of $250 for 25 years, you will have more than $200,000 in the account when you are ready to retire (calculated using the future value of an annuity formula).
4. Like any investment, you need to be sure to keep an eye on it. This means that over time, you should monitor the mutual fund's performance and make changes as necessary.

Concepts in Action

Four of your aunts and uncles are talking about ways to save for retirement. They heard you are in a personal finance class and would like your help in determining what type of IRA they should establish. Use the following information to answer their questions.

1. James is 50 years old and single. He is employed by a regional manufacturing company and earns approximately $30,000 per year.
2. Lily is also single. She is 62 years old and retired. Lily receives Social Security benefits and occasionally takes withdrawals from her savings to pay bills.
3. Micki is 30 years old and attends college full-time pursuing a graduate degree in pharmacy. She receives scholarships that cover her tuition. Micki pays for her other expenses using student loans.

4. Jarvis is 42 years old and married. He is employed as a senior manager for a large financial services company. His family income exceeds $95,000 per year.

Based on this information, tell James, Lily, Micki, and Jarvis which, if any, type of IRA they should establish to begin saving for their retirement.

Solution

To provide answers to your relatives, it is important to remember that only those with earned income may establish an IRA. So only James and Jarvis qualify to start an IRA now.

1. Although he can establish either a traditional or Roth IRA, it makes sense for James to start a Roth IRA. The reason is that he is currently in a relatively low-tax bracket. It is possible that in retirement his tax bracket will be the same or possibly higher. It would be beneficial for him to receive tax-free income at that time.
2. Lily will not have access to an IRA unless she begins working again. Because she is still relatively young, she could work part-time to help pay her ongoing expenses and save the rest in an IRA.
3. Although Micki cannot take advantage of an IRA at this time, she should try to save as much as she can while in college. Once she starts working, she too should begin contributing to an IRA.
4. Jarvis should consider starting a traditional IRA. His family's income may fall during retirement. The value of an immediate tax deduction may be worth more than receiving future distributions on a tax-free basis. It is important to note, however, that some could make a compelling argument that Jarvis should also use a Roth IRA, especially if tax rates are expected to increase in the future.

IRA Rollovers

If you are like the average American, you will change jobs at least seven times during your working career. This means you may accumulate several employer-provided retirement plans. Having so many plans can make it challenging to manage things on an ongoing basis. Fortunately, the IRS has a solution for you: an **IRA rollover**.

According to the IRS, nearly any money held in a retirement plan or IRA can be "rolled over" into another IRA. You can roll over a 401(k), 403(b), 457, or similar retirement plan into a traditional IRA after you terminate employment (see **Helpful Hint**). This is important to know because sometimes an employer will cash out plan assets of those who change jobs. If this were to happen to you and you did not roll over the money into an IRA within 60 days, you could be penalized by the IRS and taxed. By rolling over your account balance, you continue to save for your future and your money continues to grow on a tax-deferred basis. When it comes time to roll over money into an IRA, you have three options:

HELPFUL HINT

Keep in mind that only the vested portion of your retirement account can be rolled over.

1. **Direct rollover.** If you are going to receive a distribution from a retirement plan, you can ask your employer to make the payment directly to an IRA. No taxes will be withheld from the amount transferred.
2. **Trustee-to-trustee transfer.** If you are moving assets from a retirement plan or another IRA, you can ask the financial institution holding your retirement assets to make the payment directly to your new IRA. No taxes will be withheld from your transfer amount.
3. **60-day rollover.** If a distribution from a retirement plan is paid directly to you—you receive an actual check or have money deposited into your bank account—you have 60 days to "roll over" the distribution (or a portion of the distribution) to an IRA.

The first two options are better because taxes will be withheld from the retirement plan distribution under the 60-day rollover plan. To avoid taxes and penalties, you will have to use other funds to make sure that you roll over the full amount of the distribution (the amount distributed to you plus the amount withheld for taxes). For example, let's say you take a $10,000 distribution from a retirement plan directly.

- Your employer will withhold $2,000 for possible taxes and give you $8,000.

HELPFUL HINT

A special rule allows individuals to do a 60-day rollover from an IRA to another IRA only once every 12 months.

- You have 60 days to deposit $10,000 into an IRA to avoid taxes and penalties.
- If you only deposit $8,000, the other $2,000 will be fully taxable. And if you are younger than age 59½, you will also pay a 10% penalty on the $2,000!
- This is the reason it is better to do a direct or trustee-to-trustee rollover (see **Helpful Hint**).

Although this discussion has highlighted the role of using rollovers from retirement plans to IRAs, a rollover can be used in other situations as well. **Illustration 10.2.8** shows some of the ways a rollover technique can be used.

ILLUSTRATION 10.2.8

Types of Allowable Rollovers

From ↓ / To →	Traditional IRA	Roth IRA	Retirement Plan
Traditional IRA	Yes	Yes	Yes
Roth IRA	No	Yes	No
Retirement Plan	Yes	Yes	Yes

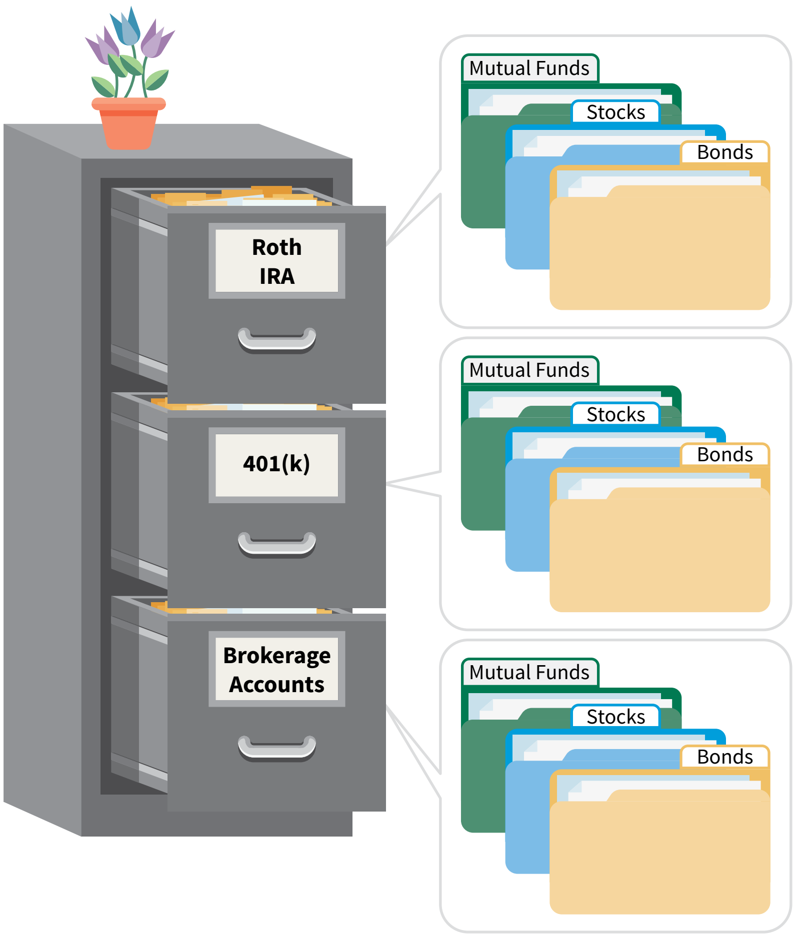
IRAs and Your Overall Retirement Plan

Planning Your Retirement Investments

Because you will probably end up with several retirement plans and multiple IRAs during your lifetime financial journey, it is important to keep track of these accounts. Remember that when it comes to reaching your retirement goals, you must make sure that your money is working for you at all times. This means that *you need to make sure that you are adequately diversified across retirement plans*. Also, it is essential that you earn a rate of return that will allow you to accumulate enough wealth to retire. It might help to think of retirement plans, like IRAs and 401(k) plans, as being similar to the file cabinet shown in **Illustration 10.2.9**.

ILLUSTRATION 10.2.9

File Cabinet Approach for Retirement Investments



- One drawer could represent a Roth IRA, another a 401(k), and a third a brokerage account.
- Imagine that within each drawer are hanging folders that represent the investments held in each account, such as mutual funds, exchanged-traded funds (ETFs), stocks, or bonds.
- When viewed this way, you can see that what is important are the investments within the drawers.
- This is the smart thing to do because it turns your attention from focusing on the accounts to making sure that the investments held across accounts are diversified and generating high average returns.

Let's look at this concept in more detail. The investments in each drawer are taxed differently based on the drawer in which they are held. There are some types of investments that you should hold in retirement plans and IRAs. There are other investments that are best held in brokerage accounts. Say that you own a balanced fund that generates interest and capital gains. If you hold this fund in a brokerage account, you will pay taxes on the earnings and any capital gains. It is almost always better to postpone paying taxes. This means that it would be better to hold a balanced mutual fund in one of your tax-deferred accounts, like an IRA. If this investment is held in a Roth IRA, the earnings from that same balanced fund would never be taxed if certain conditions are met.

As this example illustrates, where your money is held is an important consideration when saving for long-term retirement goals! Using a file cabinet approach can help you make sure that your investments are in the right place based on the tax attribute of the account.

Reaching Your Retirement Goal

How much will you need to fund retirement? It is not unrealistic to think that you will need more than $1 million when you retire. Here are some guidelines to help make this happen.

- If you are in your 20s, save between 10% and 15% of your paycheck for retirement.
- If you don't start saving until you are in your 30s, then the amount you will need to save is between 15% and 25%.
- If you wait to start saving until you are in your 40s, you will need to save between 25% and 40% of your income each year for retirement.

Once you have determined an amount to save, the next step in reaching your retirement goal is to choose how you want your money invested. One easy solution is to simplify things and purchase a **target date mutual fund**.

- **Target date mutual funds manage investment assets based on a set date that is intended to coincide with your retirement date.** If you hope to retire around the year 2045, you would then purchase a 2045 target date mutual fund.
- **Target date mutual funds invest in many different types of other mutual funds.** Thus, with each investment into a target date fund, you get immediate diversification into stocks, bonds, international securities, and other assets, and the peace of mind that you are making progress toward retirement.
- **Target date funds adjust the amount held in stocks, bonds, and cash over time.** When you are younger, the fund holds more stock. As you age, the fund automatically reduces the amount held in stocks and increases holdings in bonds and cash. This is what you would do if you were actively managing the money. It is also what would happen if you hired a financial advisor to manage your accounts. Target date funds just do it with less hassle and cost.

Reaching your retirement goals, as **Illustration 10.2.10** summarizes, consists of a few easy steps. Just like the tortoise in Aesop's fable, a steady approach will help you achieve success!

ILLUSTRATION 10.2.10

Keys to Reaching Your Retirement Goals

1. Start saving early.	As soon as you begin working full-time, you should start saving for retirement.
2. Save at least 12% of your income.	No matter what you earn, you should be saving at least 12% of your income for retirement. If you want to retire early, save more.
3. Automate your savings.	Don't force yourself to choose whether to save or spend each paycheck; just decide now to save and then make it happen.
4. Invest aggressively.	Remember, you are saving for a goal 30 or 40 years away; don't be bothered by yearly ups and downs in the markets. Generally, you will want to invest in assets that have done well over the long run, such as stock index mutual funds. Older individuals with shorter time horizons may want to invest in more conservative investments.

End-of-Topic Assessment

Multiple-Choice Questions

1. A retirement plan that provides the possibility for a tax-deductible contribution and tax-deferral of earnings is called a:

- **a.** traditional IRA.
- **b.** 401(k) plan.
- **c.** Roth IRA.
- **d.** both traditional IRA and Roth IRA.

2. Roger is currently age 68. He is creating a retirement income plan. As such, he needs to estimate his future required distributions from his retirement plans. Help Roger by telling him when he must begin taking distributions from his Roth IRA.

- **a.** He should already be taking distributions because he is older than age 59½.
- **b.** He must begin minimum distributions when he turns age 70½.
- **c.** He can wait until he begins taking Social Security benefits, which is currently age 70.
- **d.** He never needs to take a distribution.

3. **Calculate** Barney, age 61, has taken full advantage of the tax law and fully deducted each year's contributions to his traditional IRA for the past 35 years. Barney has now begun taking distributions from his traditional IRA. What percentage of each distribution will be taxable?

- **a.** 0%.
- **b.** 50%.
- **c.** 75%.
- **d.** 100%.

4. Somerset, age 43, is self-employed and started saving for retirement 8 years ago using a Roth IRA. He liked the idea of someday taking distributions on a tax-free basis. Unfortunately, he has recently run into some business troubles and needs to raise cash quickly. He would like to take a distribution from his Roth IRA immediately. Which of the following statements is *true* for Somerset?

- **a.** Because he is younger than age 59½, any distribution will be subject to a 10% early withdrawal penalty.
- **b.** As long as he only takes out his contributions—not the account earnings—the distribution will be tax- and penalty-free.
- **c.** Any distribution will be deemed a return of earnings and principal; this means that his contributions will be subject to tax, while the earnings will be subject to a 10% penalty.
- **d.** The distribution is not allowed, unless he is purchasing a new home or paying for a child's education, before age 59½.

5. Who may contribute to an IRA this year?

- **a.** Miguel who works part-time at a pretzel shop in the mall.
- **b.** Linda who is enrolled full-time in school but not employed.
- **c.** Tony who is retired and living off Social Security.
- **d.** All of these answer choices are correct.

6. **Calculate** Laney, age 53, is self-employed and has never made much money. But, she has consistently saved $3,000 per year into a traditional IRA. Over the years, she has taken full advantage of the tax law and deducted each year's contribution from her tax return. If Laney started saving at age 25 and has earned an average annual return of 6%, how much is the account worth today?

- **a.** $15,335.
- **b.** $40,214.
- **c.** $205,584.
- **d.** $334,304.

7. The best plan to save for retirement is to:

- **a.** make it automatic.
- **b.** consult a professional.
- **c.** only purchase individual stocks.
- **d.** buy high and sell low.

8. Xavier recently graduated from college with a degree in mechanical engineering. He currently makes $87,000 per year. He has aspirations to move up within his firm and eventually earn much more. If his plan works out, he will be paying more taxes sometime in the future. Which of the following retirement plan options should Xavier choose today?

- **a.** Treasury Direct IRA.
- **b.** Traditional IRA.
- **c.** Roth IRA.
- **d.** Rollover IRA.

9. Ruby is 62 years old. She currently owns both a traditional IRA and a Roth IRA. She has no preference which account to use for this year's contribution. Based on the IRA contribution limits described in this

topic, she can contribute a combination of ______________ to the traditional IRA and ______________ to the Roth IRA.

a. \$5,500; \$5,500
b. \$6,500; \$6,500
c. \$0; \$5,500
d. \$6,500; \$0

10. Deciding how to invest retirement savings can be a time-consuming task. However, there are investments that simplify this task. These investments are called:

a. exchange-traded funds.
b. index funds.
c. bonds.
d. target date funds.

Adventures in Personal Finance

Short Answer

1. What are some of the primary differences between traditional and Roth IRAs?
2. **Calculate** Darla, age 30, is considering opening a Roth IRA. How much will she have in the account at age 65 if she makes an annual \$2,000 contribution and can earn an annual 7% rate of return?
3. **Writing** If you were to open an IRA, what type would you open, a traditional or Roth IRA? What company would you open your IRA through? If you were to purchase a target date fund, what would your target retirement date be? Summarize your answers to these questions in a brief report.
4. Tom, age 49, has been saving in a traditional IRA for the last 15 years. Tom's daughter, Liela, was just accepted into college. Explain what will happen if Tom takes a distribution from his IRA to help fund Liela's education.

Explore

1. **Groupwork** **Writing** Working with two or three classmates, develop a short survey asking people whether they have an IRA account, what type of IRA they own, and how they use their IRA account (for example, is it a rollover IRA, do they make contributions to it, and/or did they inherit it?). Because it is too personal and something people would not want to share, don't worry about asking what the balance in the IRA is. Ask at least 5 people (20 would be better) older than you to answer your survey. Based on responses, write a brief summary describing what you found.
2. **Writing** **Presentation** Visit the IRS website and find information about early and required IRA distribution rules. Specifically, obtain information that can be used to answer the following questions. Summarize your answers into a brief report. Be sure to share the results of your research with others in class.
   a. What is the age when the early distribution penalty is levied and when can it be waived? At what age must someone who owns a traditional IRA begin taking distributions? What happens if required distributions are not taken?
   b. When and how can someone take an early distribution from a Roth IRA without paying a penalty or taxes?
   c. When must someone who owns a Roth IRA begin taking distributions?
   d. Given what you have learned, which IRA offers the greatest level of flexibility?

Expanded Learning Activity

Many different types of financial institutions can open IRA accounts for their clients. Using the Internet, find five different companies that offer IRA accounts. Contact each company and find out the following for each company:

- Are commission-free (no-load) mutual funds available to purchase through the IRA account?
- What target date funds do they offer, what are the fees to purchase a target date fund, and what is the expense ratio for the funds?
- What is the minimum investment to open an IRA account?
- Can the minimum investment be waived if monthly deposits are made into the IRA account?

Property Ownership and Trusts

LO 10.3 Identify the multiple ways property can be held and transferred.

We all own property. Not necessarily real estate, but certainly clothes, furniture, books, and electronics. Most likely, no one questions your ownership of these items. As a property owner, you have the sole right to do whatever you want with your assets. You can sell them, give them away, or throw them in the trash.

However, other items require a title, a more formal proof of ownership, such as cars, houses, boats, and most investment assets. In this topic, we discuss how designating property ownership through titles and trusts can be an important consideration throughout your lifetime financial journey.

Titles and Transfers of Property

Ways to Title Property

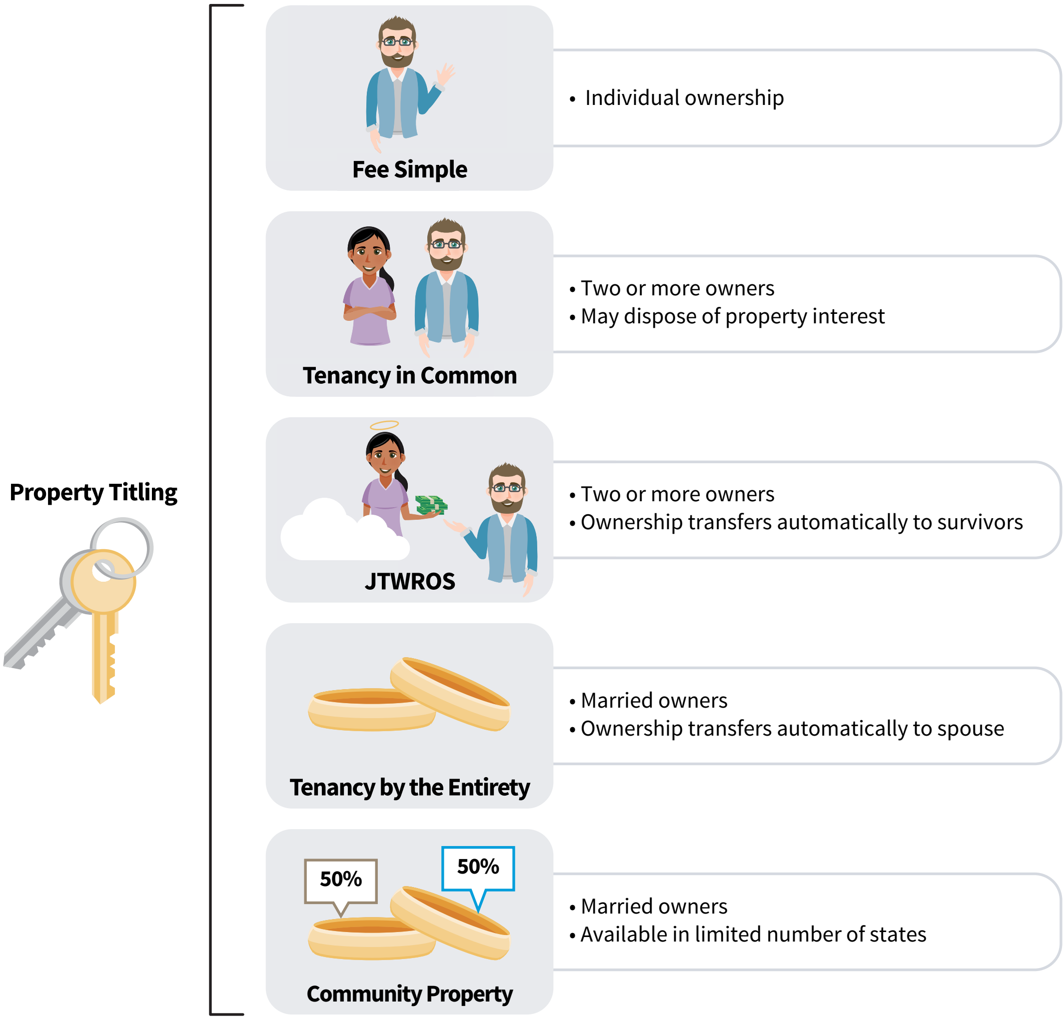
A **title** provides proof of property ownership, whether a house, a car, or a mutual fund. The way you title property is important because titling designates who owns the property and what the owner can do with it. You need a title when you own property with another person. As shown in **Illustration 10.3.1**, there are five ways to title property:

1. **Fee simple**: You are the sole owner of the property.
2. **Tenancy in common**: You own the property with another person. For example, if you and your friend own a car, you would each be allowed to sell or give away your interest in the car. With tenancy in common, your level of ownership can be different, say, 70% for you and 30% for your friend.
3. **Joint tenancy with right of survivorship (JTWROS)**: You own the property equally with another person, and each of you has rights of survivorship. That is, when one owner dies, the other owner receives that person's interest in the property. The transfer is automatic.
4. **Tenancy by the entirety**: You own the property with your spouse, and each spouse owns the undivided whole. This form of ownership provides greater protection from creditors. For example, one spouse cannot be forced to sell his or her interest in the property to satisfy the creditors of the other spouse. If one spouse passes away, the surviving spouse already owns the property. This method of titling property is not available in some states.
5. **Community property**: You own the property with your spouse and live in a designated state that allows this special form of titling. (Under this form of ownership, only those living in Alaska, Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington, or Wisconsin may elect to own jointly held assets as community property.) One-half of all assets held as community property belong to each spouse. This means that all earnings, property, and anything else obtained during marriage are legally owned 50–50.

It is also possible to title savings bonds and bank and brokerage accounts in a way that transfers the assets at death to a named beneficiary without giving the beneficiary direct immediate ownership of the assets.

- A **payable on death (POD)** account includes a designation of one or more beneficiaries who will receive the assets when the account owner dies.
- A **transfer on death (TOD)** registration works the same way for brokerage account assets.

ILLUSTRATION 10.3.1 **Five Ways to Title Property**



Ways to Transfer Property

There are two primary ways you can transfer the title of an asset to someone else when you are still living.

1. You can sell the property.
2. You can give the property away.

When you die, you have essentially the same options, but the process of transfer is different. You, of course, cannot sell or gift your property personally. Instead, these actions tend to be administered under the watchful eye of your state's probate court. **Probate** is the court-supervised process of distributing assets and paying debts after someone's death.

- Probate can be a time-consuming, public process that many people would like to avoid.
- One reason to avoid probate is to maintain family privacy after the death of a loved one.
- Another reason is to ensure that property is transferred and used in the future according to the deceased's wishes (once an asset is transferred to someone else through the probate process, the new owner can do what he or she wants with the property, even if that conflicts with the previous owner's original wishes).

There are ways to avoid probate. The two most common ways include titling property appropriately and using trusts.

- Titling your assets as JTWROS automatically transfers ownership to another person outside the probate process upon your death.

- You can also avoid probate by naming beneficiaries to retirement plan assets, insurance contracts, and other financial products that allow the naming of beneficiaries.

Trusts

HELPFUL HINT

One of the best ways to avoid probate is through the use of a trust.

A **trust** is a legal entity that holds property and assets for someone or some group (see **Helpful Hint**). You might establish a trust if you want:

- To own assets for minor children or children who are unable to manage their affairs.
- Someone else to help manage your financial assets.
- To allow for the distribution of assets on a predetermined schedule.

When you set up a trust, you can specify exactly how you want your assets invested, who should get income from the trust, and what should happen to the assets when you die. You can create a trust when you are alive or through your will. A trust created through your will is a **testamentary trust**. You can also create trusts to help charities, to own life insurance, or to achieve other estate-planning purposes, particularly if you have a large amount of money. Be sure to clearly understand the purpose and reason for setting up a trust since it can be expensive.

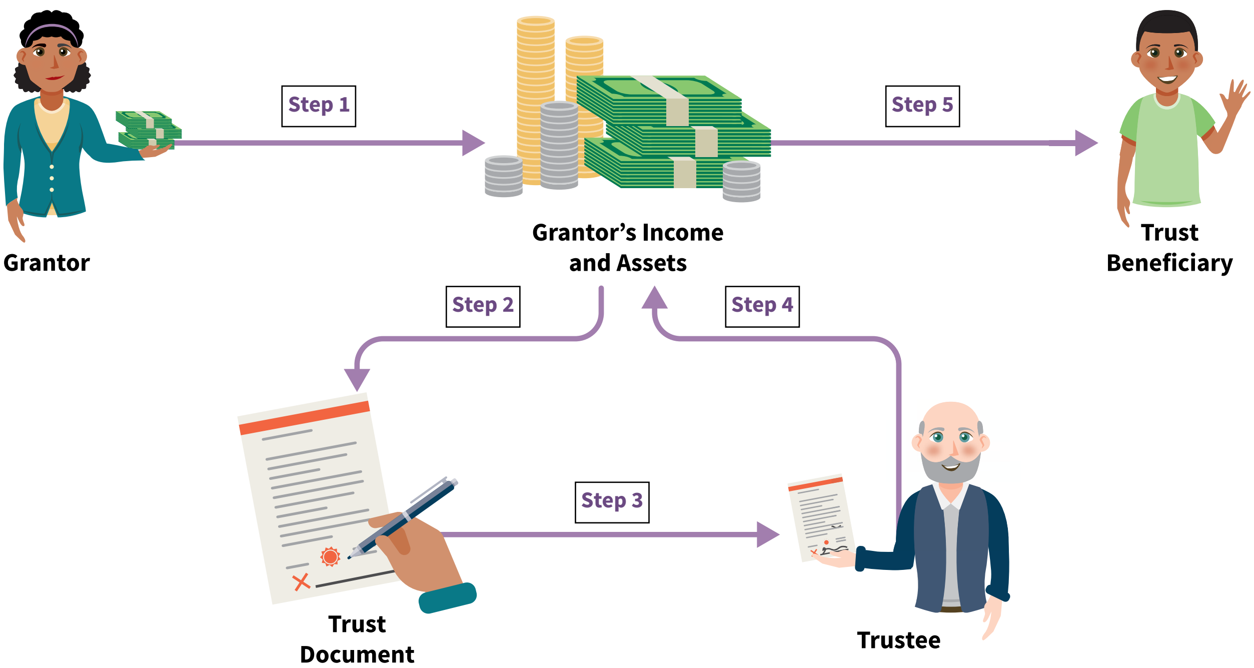
Structure of a Trust

A trust has a specific structure.

- When you establish a trust, you are called the **grantor**. Anything that you can title, like a home, car, or investments, can be owned by a trust.
- Once the trust is established, you then need to determine a **beneficiary** of the trust. While you are alive, you can be the trust beneficiary. You will also need to name someone or an organization to be the ultimate beneficiary or what attorneys call a **remainder beneficiary**.
- You must also name a trustee. The **trustee** is the person or organization (such as a bank) that will manage the trust assets and authorize distributions from the trust based on the instructions given by the grantor. You may be the grantor, beneficiary, and trustee of your own trust.

Although it is possible to use an online service to establish a trust, it may make sense to pay an attorney to help you properly draft the appropriate documents. Whether you set up a trust yourself or use a professional for help, the structure of your trust will be similar. **Illustration 10.3.2** shows the typical process of establishing and using a trust.

ILLUSTRATION 10.3.2 **The Process of Establishing and Managing a Trust**



Types of Trusts

When it comes to estate planning and trusts, there are four main trusts that can be established.

1. A **living trust**, which refers to the fact that the trust is created while the grantor is still alive.
2. An **irrevocable living trust**, which means that, once established, the trust cannot be changed.
3. A **revocable living trust**, which allows the grantor (who is almost always the trustee) to do whatever he or she wants with the trust assets while alive, including withdrawing all the assets out of the trust. At the time of the grantor's death, however, revocable living trusts become irrevocable.
4. A **testamentary trust**, which is established after the death of the grantor through a person's will. All testamentary trusts are irrevocable.

Trusts: A TV Example

You may never have seen the TV show, but you have probably heard of *Here Comes Honey Boo Boo*. This TLC® reality television series, which went off the air in 2014, featured Alana "Honey Boo Boo" Thompson and her family. When the show first aired, Alana was 6 years old. The show also regularly featured Alana's mother June Shannon; her father Mike Thompson; and Alana's three sisters, Lauryn, Jessica, and Anna. When the first season of the program aired, Alana's sisters were age 12, 15, and 17, respectively.

The show made a lot of money for the family. Media sources estimate that the family earned about $20,000 per episode. At the end of 2013, after TLC® had aired 45 episodes of the program, Alana and her family had earned approximately $900,000 in television royalties. The family will likely earn even more if the series ever goes into recurring reruns.

Alana's mother June may act like someone who is clueless about financial issues on television, but she is in reality very smart. She established irrevocable trusts for each of the children (as legal minors, none were allowed by law to take possession of any earnings until age 18). Since shooting the first episode, June had TLC® deposit each girl's share of the show's revenue into the trusts. June established each trust so that the daughters could access their money at age 21 or for use to pay for college expenses.

Consider Alana's situation. Say she starts out with $300,000 in her trust. If she waits until age 21 before taking out any money, and assuming she can earn 8% on the money saved, she will have a nest egg of approximately $650,000 when she gains access to the trust assets!

Gifts and Inheritances

Tax Effects

In an interesting twist of the law, you may receive an unlimited dollar amount as a **gift**—an irrevocable transfer of an asset from one person to another—or as an **inheritance**—property received when someone dies—totally income-tax-free at the federal level (a few states levy inheritance taxes on the amount of money you receive). Oddly, the gift giver or the deceased person's estate pays the tax on the transfer as follows:

- Anyone who gives more than $15,000 (in 2018) to one person is obligated to file a gift tax return. Depending on the amount of cumulative taxable gifts, the gift giver may pay a gift tax.
- If someone dies and the value of her or his **estate**—assets less liabilities and other expenses—is greater than $11.2 million, she or he may owe a federal tax (see **Helpful Hint**).

HELPFUL HINT

These rules do not apply if the gift or estate transfer is made to a charity.

As shown in **Illustration 10.3.3**, when it comes to gift and inheritance taxes, it truly is better to receive than to give.

ILLUSTRATION 10.3.3

The Receipt of a Gift or Inheritance Is Tax-Free

Gift	Inheritance
Gift tax return filed if gift is more than $15,000	Estate tax paid if deceased net worth is more than $11.2 million (2018, indexed for inflation)
Gift giver may pay tax if cumulative taxable gifts are exremely high	Tax paid by deceased's estate
Gift received tax-free	Inheritance received tax-free

How Gifts and Inheritances Can Have an Impact on You

If you are just starting out on your lifetime financial journey, it is unlikely that you need to worry about paying gift or estate taxes, or setting up a trust today. But as your wealth grows, these topics may become important. It is likely, for instance, that you will establish a trust at some point in the future. On the other hand, you may be the recipient of a gift or inheritance, or you may be asked by a parent or grandparent to help with the transfer of gifts and property sometime soon. In the meantime, knowing how property is titled and what will happen to your assets if you were to die unexpectedly is an important part of navigating your lifetime financial journey.

Concepts in Action

Daryl recently sold her technology startup firm for several million dollars. In the spur of the moment, she made the following gifts to family, friends, and organizations:

1. $10,000 in cash to her brother to help pay for college expenses.
2. $25,000 in cash to her church.
3. A car valued at $25,000 to her mother.
4. A luxury European vacation worth $20,000 to her grandfather.
5. An $18,000 watch to her boyfriend.
6. The use of her $250,000 condo in Daytona Beach to her best friend in return for doing yardwork around her house each week.

Which of these gifts is potentially taxable to Daryl? Which of the gifts is potentially taxable to the person or organization that received the gift?

Solution

The car, vacation, and watch gifts are potentially taxable as they are worth more than $15,000 (note that the annual gift tax exclusion changes periodically). The gift to her church is exempt from taxation because the church is a public charity. The use of the Daytona Beach condo is not a gift because Daryl stipulated that work must occur to use the condo; in other words, because the transfer could be cancelled by Daryl—the transaction was revocable—it is not a gift. None of the gift recipients are liable for a gift tax.

End-of-Topic Assessment

Multiple-Choice Questions

1. When must the ownership of property be documented through a title?

   a. When you own an asset outright.

   b. When you own an asset with another person or persons.

   c. When you own an asset that requires contractual payments.

   d. Both when you own an asset with another person or persons and when you own an asset that requires contractual payments.

2. John and Emily are married and have two children, ages 5 and 7. If they purchase a new car, what titling alternative(s) are available to them as a married couple (assuming their state recognizes all available titling options)?

I. Tenancy in common.

II. Joint tenants with the right of survivorship.

III. Tenancy by the entirety.

a. I only.
b. III only.
c. II and III only.
d. I and III only.

3. Natasha and Link have been married for 2 years. They live in North Carolina and are about to make an offer on their first home. Their goal is to own the property so that if either Natasha or Link were to die, the surviving spouse would own the property outright. They also want to keep things private and avoid probate. How should they title their new home?

a. Link should own the house fee simple and name Natasha as his beneficiary.
b. Because they live in North Carolina, they should title the home as community property.
c. Tenancy in common is the best way to title the property because it meets all their objectives.
d. They should title the home as JTWROS as a way to accomplish their goals.

4. Scotty and Kirk own a speedboat together. They are not related but have been friends since childhood. They own equal shares of the boat. When thinking about the future, Kirk would like to pass his share of ownership to his son, Leonard. How must Scotty and Kirk title the boat?

a. Fee simple.
b. Tenancy in common.
c. JTWROS.
d. Community property.

5. Scotty and Kirk own a speedboat together. They are not related but have been friends since childhood. They own equal shares of the boat. Thinking about the future, Kirk decides he would like to leave his half of the boat to Scotty should he die first. What form of titling would ensure that Kirk's wishes are met, even if Kirk's son Leonard contested the transfer?

a. Fee simple.
b. Tenancy in common.
c. JTWROS.
d. Community property.

6. Duke and Delores own rental real estate together. They are not married but have been business partners for nearly 20 years. Delores is very worried about her private affairs becoming public if she were to die unexpectedly. Duke told her that they should retitle their business holdings in a way that avoids probate. Which of the following forms of title can they use to meet this objective?

I. Tenancy in common.

II. JTWROS

III. Tenancy by the entirety.

a. II only.
b. III only.
c. II and III only.
d. I and III only.

7. A person who establishes a trust is known as the _____________, whereas the person who is entitled to the income and other distributions from the trust is known as the _____________.

a. trustee; grantor
b. grantor; trustee
c. grantor; beneficiary
d. trustee; beneficiary

8. A trust that is funded at your death is called a:

a. bypass trust.
b. testamentary trust.
c. will trust.
d. living trust.

9. If you are younger than age 18 and own investment assets, who controls the management of the investments?

a. You do.
b. As long as you are competent, you are allowed to manage the investments.
c. Your parent or guardian until you reach age 18.
d. A court-appointed trustee until you reach age 18.

10. Fan just received a $45,000 check in the mail from her great uncle. A note with the check said that Fan was to use the money for the down payment on a new house. Is this gift taxable to Fan?

a. No, although it is true that generally taxes must be paid, because the gift was to be used for the purchase of a home, the federal tax is waived.
b. No, the gift is not taxable to Fan, but because it exceeds the annual gift tax exclusion amount, it may be taxable to Fan's great uncle.
c. Yes, because the gift exceeds the annual gift tax exclusion amount.
d. Yes, because all gifts, regardless of intent or recipient, are taxable.

Adventures in Personal Finance

Short Answer

1. Imagine your favorite aunt is about to be married. Once married, she and her spouse plan to live in Florida to enjoy the sunshine and beaches. As a couple, they have the following property ownership goals:

- To purchase a single-family home.

- To title the home so, regardless of who might die first, the surviving spouse will own the home automatically.
- To maintain financial privacy and avoid probate.

How should they title their new home?

2. Recently, Kim found out that she will receive a sizable inheritance from a distant uncle. At lunch one day, her friend Lily exclaimed, "Kim, you are so lucky to receive a gift like this! I can't even imagine what I would do if someone gave me that much money." What is wrong with Lily's statement?

3. Tyler received a gift last year from his neighbor. In return for the gift, which is a riding lawn mower worth about $3,000, all he needs to do is mow the neighbor's lawn every week. Otherwise, the neighbor gets the mower back. Why is the lawn mower not really a gift?

4. What type of trust should Billy establish if his primary goal is to avoid probate and, as he says, "keep everything in my life very private"?

Explore

1. Search the Internet for the *Chicago Tribune* article from 2000 that details the life of several young actors and how their wealth was abused. What steps could the parents or guardians of these young stars have taken to better protect the wealth created while these actors were still considered minors?

2. Pete has $45,000 in a brokerage account. Pete is single and would like these assets to go directly to his sister upon his death. Visit the **Securities and Exchange Commission (SEC)** website to determine how Pete can title his brokerage account to both avoid probate and ensure that his sister receives the property.

Expanded Learning Activity

Writing **Presentation** Gift and estate taxes fall under the broader U.S. wealth transfer tax system. Conduct a study of the history and purpose of gift and estate taxes. Specifically, when were these taxes introduced and why did Congress feel compelled at that time to introduce these taxes? In addition to documenting the historical development of the gift and estate tax system, comment on whether you believe the current tax system allowing one person to transfer more than $11.2 million during her or his lifetime tax-free is fair and equitable. Summarize your research and thoughts in a 2- to 3-page paper. Be sure to share the results of your study with others in class.

Wills: A Fundamental Estate Planning Tool

LO 10.4 Explain the use of wills as a tool to transfer property after death.

Soap operas are notorious for spinning complex plots that involve family intrigue, infighting, and mystery. Some of the storylines hinge on the conspiracy surrounding a person's will. A common plot is that outraged relatives contest a will that leaves a wealthy person's assets to some unknown person. Although these television shows are full of drama, the actual writing and use of wills is often more mundane.

A will's purpose is straightforward: to transfer property of a person who has died according to his or her wishes. Wills can be short (one page), or lengthy legal documents that are difficult to decipher. At some point in your lifetime financial journey, you will want to draft and execute a will. Perhaps equally important, an older family member may need to draft a will to let loved ones know his or her wishes. Knowing a person's wishes before she or he passes away may help avoid hurt feelings among surviving loved ones trying to divide up assets. In this topic, we discuss the basics of wills.

Transferring Property After Death

There are four ways property can change ownership when someone dies (see **Helpful Hint**).

HELPFUL HINT

A trust may also be used to transfer property after death.

1. **Title:** Legal evidence of property ownership.
2. **Contract:** A legally enforceable agreement.
3. **State law:** Governmental statutes describing how assets are transferred when no will is present.
4. **Will:** Legal document describing how assets should be distributed after death.

Let's review each option next.

Title

The way in which property is titled often dictates exactly how property will transfer from one person to another after the owner dies.

- Property titled as **joint tenants with right of survivorship (JTWROS)** will automatically transfer to the co-owner.
- A **payable upon death (POD)** title is used on a bank account to transfer cash and assets to someone else.
- A **transfer on death (TOD)** account can be established to ensure that stocks, bonds, mutual funds, and other investment assets transfer to a named beneficiary at death (see **Helpful Hint**).

HELPFUL HINT

The difference between a TOD and a POD is that a TOD is used to title investment accounts, whereas a POD is used to title bank accounts and assets.

The use of appropriate titling is an effective financial planning tool, especially for those who want to ensure that their assets are transferred after death in a timely and efficient manner. However, some assets, such as jewelry and other household items, are unable to be titled.

Contract

Property can also be transferred using a contract.

- A **contract** is a legally enforceable agreement between two or more parties.
- The use of beneficiary designations on life insurance contracts and in certain retirement plans, such as 401(k), 403(b), and 457 plans, is quite common. For example, the face value of

a life insurance policy will be transferred directly to a beneficiary as outlined in an insurance contract.

- Because the transfer occurs via contract, the transaction tends to be completed quickly with little publicity.

Keep in mind, however, that a contract has the same limitations as a title: only property specifically covered by such a document can be automatically transferred at the time of death.

State Law

For property that is not transferred through a title, contract, or will, the laws of the state where the deceased person lived will determine who receives his or her assets. Each state has its own laws, as administered through the probate court. The difference between one state and another can be dramatic. For example, in some states, the parents of a deceased person receive all assets not transferred through a title, will, or contract. In other states, these assets are shared by parents and siblings. Things get even more complicated if someone's parents are no longer alive. Here are two things to remember about asset transfers that happen according to state law.

1. All property not transferred by some other means (e.g., title, contract beneficiary, will) falls under state law.
2. As already mentioned, each state has its own unique way of distributing someone's property, and the process can get complicated.

State law can be beneficial in that it is applied consistently for all residents of a state. On the other hand, reliance on state laws can be a disadvantage because of time delays, costs, and the publicity surrounding the transfer of assets. A will is often considered to be a more effective alternative for use in directing the transfer of property upon death.

Wills

HELPFUL HINT

The person who dies is often referred to as the decedent.

A **will** is a legal document that dictates someone's desires regarding the distribution of property after death (see **Helpful Hint**). A **testator** is a person who makes a will. To die with a will is termed to die **testate**. Someone who dies without a will is deemed to have died **intestate**. Generally, anyone older than age 18 may draft a will. The law makes a distinction between making a gift and leaving a bequest through a will.

- A **gift** is the irrevocable and voluntary transfer of property to another person while the gift giver is alive. This means that once the gift is made, the person making the gift cannot take the property back or control how the property is used by the new owner.
- A **bequest** involves leaving property to another party after death through a will. This transfer is also irrevocable.

Illustration 10.4.1 shows how the process of making a gift differs from a bequest.

Elements of a Will

Illustration 10.4.2 shows the elements of a will. Although the specific factors that need to be present for a will to be valid may differ from state to state, these elements are common on a national level.

Will Disclaimers

Although a will is a legal document, it is important to note that the wishes outlined in a will are not always legally binding. Say that Ashley left her couch, dining room chairs, and refrigerator

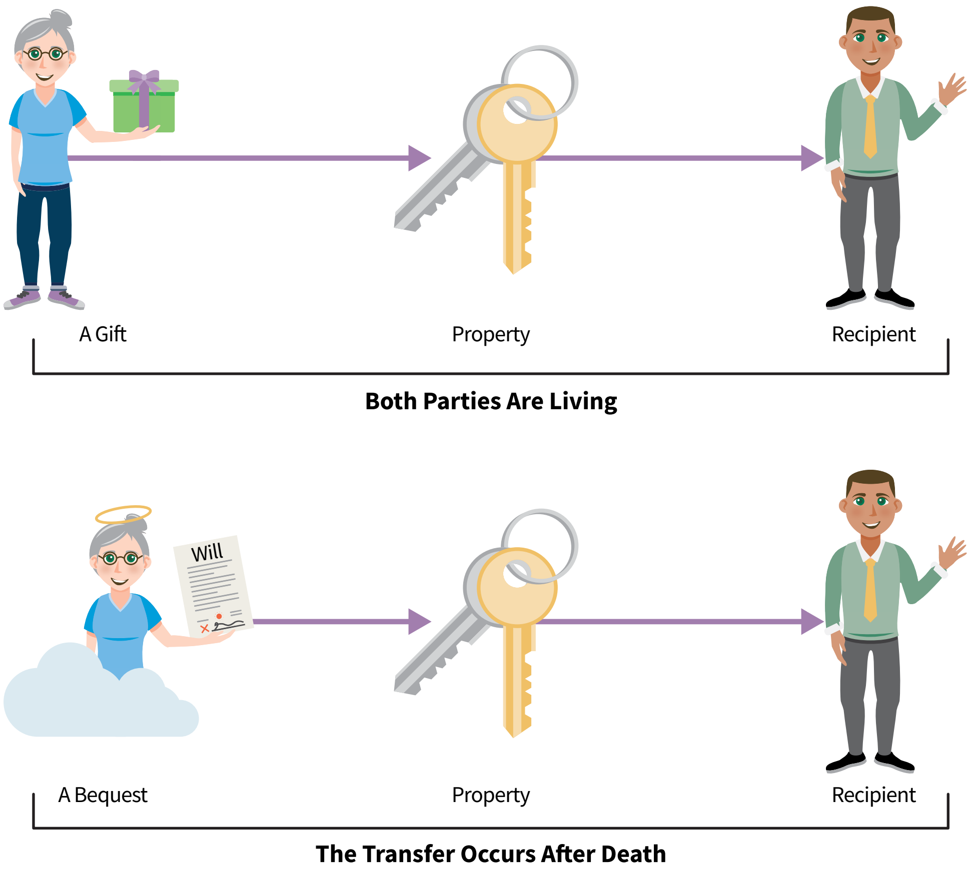


ILLUSTRATION 10.4.1

The Difference Between a Gift and a Bequest

to her best friend Tony. Does the law require that Tony take the bequest? Absolutely not. Let's see what happens if Tony rejects the bequest.

- Tony can choose to **disclaim** the property (not accept the bequest). He might feel badly about disclaiming the property, but he is under no legal obligation to take what he does not want.
- If Tony does disclaim, the property goes back into Ashley's estate and passes according to either her will or the laws of her state.
    - ◆ For example, Ashley can write a **residual clause** in her will when she is still alive. This clause states how all remaining property should be distributed in case there is something left in her estate or property is disclaimed. For example, Ashley could leave everything not claimed or distributed to a charity (note the charity may also disclaim the property).

ILLUSTRATION 10.4.2

Elements of a Will

Legal age	• Typically, age 18 • Some exceptions for married minors and young parents
Sound mind	• Must be legally competent to make decisions
Intention	• Must specifically list property to be transferred • Must specifically indicate to whom property will be transferred
Written	• Most states require a word-processed document • Some states allow oral and handwritten wills
Signed	• The document must be signed
Witnessed	• Typically, the will must be witnessed by two adults • Witnesses need to be competent and not beneficiaries of the will
Properly executed	• Will must be signed in front of witnesses • The drafter of the will cannot be forced to sign the will

- The term **estate** refers to someone's property, which can include personal, real, and intangible assets (e.g., **Facebook** and **SnapChat** accounts).

There is one other thing to keep in mind regarding the use of a will. Although wills are flexible, married couples generally cannot disinherit their spouse. This means that a spouse may be entitled to a deceased spouse's assets, regardless of what is written in a person's will. The limitations of this rule vary by state, so if you want to limit the amount of your estate going to your spouse, first check the laws of your state.

Personal Representative

An important element in any will is the appointment of an **executor** (some times called a **personal representative**). This is the person (e.g., relative or attorney) or institution (e.g., trust company) tasked with the responsibility of carrying out a will's directions and disposing of the deceased's property.

HELPFUL HINT

You want to avoid having the state name an executor because of the costs involved. Usually an attorney will be named, with all activities billed at an hourly rate charged to the estate.

- If the deceased (the person who died) does not name an executor or dies intestate, then the state will appoint one instead (see **Helpful Hint**).
- Although all executors are entitled to be compensated for their work, a state-named representative will often be more expensive than having a relative or close friend perform the same tasks.

Probate

Recall that **probate** refers to the settlement of a person's estate—the assets and liabilities held by a deceased person—through a court-supervised process.

- Probate is a public process that ensures that the distribution of assets and payment of liabilities occurs according to a person's will or through the laws of the state.
- The executor named in the will works with the probate court to validate the will.
- **Estate taxes** are taxes assessed on the value of the decedent's estate at death. Only estates larger than $11.2 million will incur a federal estate tax (and possibly a state inheritance tax).
- It is during the probate process that a will can be contested.

Someone who wants to contest a will needs to show that the will is invalid based on one or more of the following seven factors:

1. Lack of mental capacity at the time the will was drafted.
2. Undue influence at the time the will was drafted.
3. Illegal execution of the will.
4. Rejection of the will by the probate court.
5. Forgery of the will.
6. Fraudulent actions by the heirs at the time the will was drafted.
7. Mistakes in the will.

Contesting a person's will tends to be expensive and time-consuming. It is also quite difficult to prove one of the seven factors listed. It is nonetheless important to reduce the possibility of having a will contested by making sure that your will is updated on a regular basis. One way to keep a will updated is through the use of a codicil. A **codicil** amends a person's will and is placed at the end of the written document.

Creating a Will

HELPFUL HINT

If your situation is at all complex, an attorney should draft your will.

When people think of wills, they often envision visiting an attorney's office and, with great anguish, providing a list of all properties owned and intended bequests to the attorney. Although this certainly can occur, drafting a valid will does not need to be a painful process (see **Helpful Hint**). Let's look at some of the ways you can create a will.

Drafting a Will

You can draft your own will, or you can hire an attorney to help you. You can expect the following when you take steps to draft a will.

- A basic attorney-drafted will should cost between $150 and $500. Using an attorney is a common practice, especially for unique or challenging circumstances.
- The cost will probably be lower using an online legal form or a **statutory will** (a fill-in-the-blanks form).
- As long as certain elements are present, every state accepts a written will that has been signed and witnessed by at least two adults that are not heirs.

Roughly half of all states also recognize a **holographic will** (handwritten) even if it has not been witnessed. A few states even allow recorded oral wills in the probate process, as long as the statements have been witnessed by a number of nonrelated adults.

Provisions of a Will

For a will to be valid, it must contain a minimum number of clauses and provisions. These provisions generally include the following (see **Helpful Hint**).

- The will must include an **introductory clause**, which lists the testator's city and state of residency, and a note about this being the last will and testament of the deceased.
- The will should also include a description of how assets are to be distributed.
- The will should state how all debts, taxes, and other expenses will be paid. Remember, debts and expenses must be paid first before someone can receive a bequest.
- A will should also name an executor or personal representative, and provide guidelines regarding the person's powers.
- Of special importance for those with children involves naming a **guardian for minor children**. This provision is often overlooked with tragic consequences. Without a named guardian, the state in which the deceased lived will determine who is granted guardianship. This person may not be, in fact, the best choice given the family's situation.

HELPFUL HINT

Each state has its own requirements regarding the validity of a will.

Who Needs a Will?

If you are a full-time student, do you need a will? Probably not, if you want all your assets to go to your parents, or if you are married and you want everything to go to your spouse (in some states, your surviving spouse may only receive half your estate and the other half may go to your parents or children). But for nearly every other person, having a will is a good idea. Here are some guidelines for determining when you need a will.

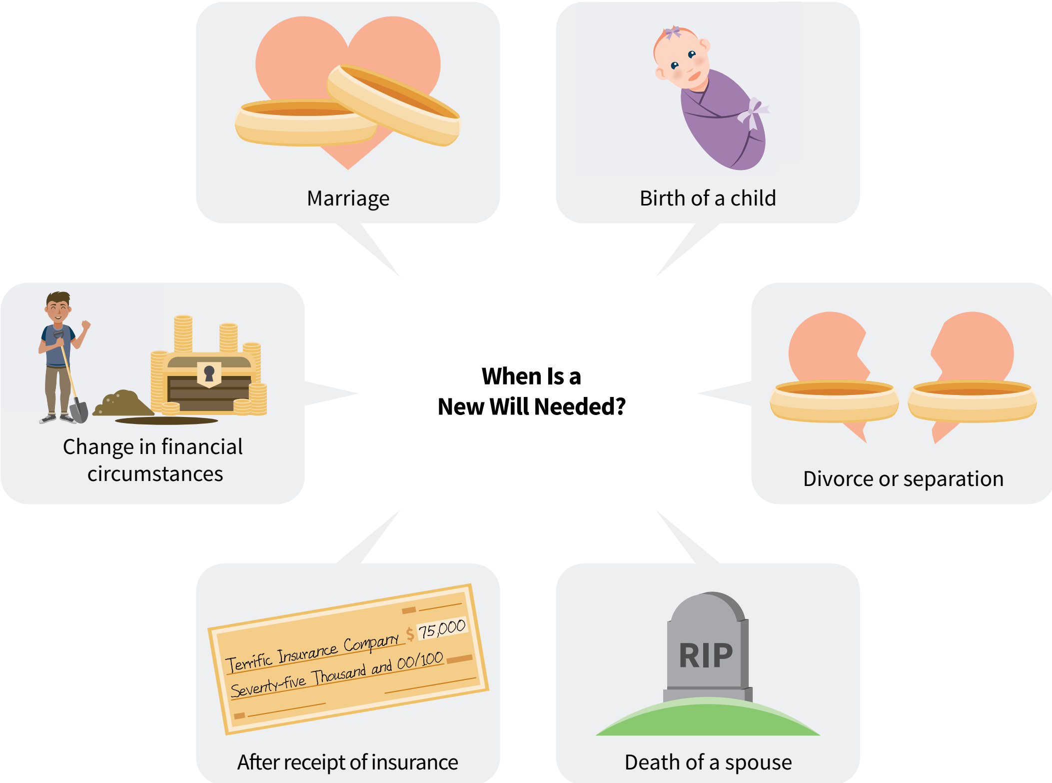
- If you would like to see your assets go to another person or organization or if you have valuable assets, a will is needed.
- If you are married, your spouse, in most states, is entitled to the property, but to be safe, a will should be used.
- If you would like to reduce financial confusion among your survivors, a will is needed.

Once you have written and executed a legal will, you should do the following.

1. Let your executor know where the will is located.
2. Keep your original document in a safe, locked, and fireproof box, and leave a copy in an accessible place or with your attorney.
3. Write a **letter of last instructions**, a non-legally binding letter to your survivors that tells them about your burial wishes and any memorials you would like. You can also include other instructions in a letter, such as what should happen with a pet.

Illustration 10.4.3 provides examples of situations that can arise that should prompt someone to draft a new will. Completely new wills are often written upon marriage, the birth of children, or after any other major life event. As soon as a new will is drafted and executed, any old wills become obsolete and non-enforceable.

ILLUSTRATION 10.4.3 **Situations When a New Will Is Needed**



Of all the financial literacy topics covered in this text, estate planning tends to be the one that is most distressing. No one really likes to think about death. This is especially true among those who are just starting out on their lifetime financial journey. But planning for life's final eventuality can make the financial journey of others that much easier. One way to think about estate planning is in terms of leaving a legacy. The use of a will, for example, ensures that your personal wishes and desires are carried out in the event of death. In this way, you make it easier for others to remember your good works and deeds.

Concepts in Action

Cynthia and Lakned Olimander, both aged 43, have been married for 8 years. They have no children or other dependents. Last month, one of Cynthia's closest friends died. Cynthia saw firsthand how difficult it was for her friend's family to work through the probate process. As a result, Cynthia decided to write a will so that her last wishes would be clear to Lakned and her family. The following is a summary of her will.

> "I, Cynthia Olimander, a resident of St. Louis, in St. Louis County, Missouri, declare this to be my last will and testament. I revoke all previous wills and codicils made prior to this will . . . I make the following bequests: (1) all of my retirement plan assets to my husband Lakned; (2) my diamond ring and necklace to my niece; (3) my 50% ownership of our personal residence to my parents, Tom and Elizabeth Smith; and (4) the assets held in my personal bank account to my church. . . . Should Lakned and I have a child, either through birth or adoption, I name my mother to be the child's guardian should I pre-decease Lakned. . . . I appoint Lakned to be my executor. . . . Finally, I request that my remains be buried in the Black Hills of South Dakota."

What are some of the potential problems associated with Cynthia's will as it is currently written?

Solution

1. Assets held in Cynthia's retirement plan will go to the beneficiary as listed in the plan, not the will.
2. Lakned may be entitled to Cynthia's diamond ring and necklace, as well as the bank account assets; he may choose to pass these assets to Cynthia's niece and church, respectively, but as the legal spouse, he is likely entitled to ownership of these assets. Similarly, he cannot be disinherited from his interest in the personal residence; it is likely that the home was titled JTWROS, which would dictate his ownership in Cynthia's interest.
3. Cynthia cannot name someone other than a custodial parent to be a child's legal guardian if she is married and that person is the parent or guardian.
4. Her final burial request is not a legally binding element of a will; this request should come in a letter of last instructions.

End-of-Topic Assessment

Multiple-Choice Questions

1. A legal document that dictates your desire to distribute your property after death is called a:

- **a.** gift.
- **b.** title.
- **c.** clause.
- **d.** will.

2. Mark, age 56, is a single man and died intestate. In addition to household and personal items, he had $450,000 in 401(k) retirement assets. Who will receive the 401(k) assets?

- **a.** Whomever Mark noted in his will.
- **b.** His brothers and sisters, in equal shares, or his parents.
- **c.** Whomever Mark listed as the account beneficiary.
- **d.** Whomever the state where he died indicates through probate statute.

3. Jeff, age 45, is a single man and died intestate. In addition to household and personal items, he had a $25,000 car. Who will receive Jeff's car?

- **a.** Whomever Jeff noted in his will.
- **b.** His brothers and sisters, in equal shares, or his parents.
- **c.** Whomever Jeff listed as the title beneficiary.
- **d.** Whomever the state where he died indicates through probate statute.

4. Willis, age 50, was a single man who died intestate. In addition to household and personal items, he had a savings account valued at $30,000. Assume Willis engaged in proactive financial planning prior to death. How did Willis ensure that his savings account assets would go to a specific person?

- **a.** Made a bequest in his will.
- **b.** Used a transfer on death title on the bank account.
- **c.** Used a residual clause to avoid probate.
- **d.** Both made a bequest in his will and used a transfer on death title on the bank account.

5. Which of the following is an attribute of a gift?

- **a.** The gifting of an asset is irrevocable.
- **b.** A gift occurs when the giver has passed away.
- **c.** The person receiving the gift may force the gifter to transfer the property.
- **d.** All of the answer choices are correct.

6. **Calculate** At her death, Melinda, who is single, has the following assets:

- $32,000 car.
- $12,000 in collectible coins.
- $87,000 403(b) retirement plan with a named beneficiary.
- $50,000 term-life insurance policy with a named beneficiary.

Based on this information, how much will pass under Melinda's will to her beneficiaries?

- **a.** $32,000.
- **b.** $44,000.
- **c.** $94,000.
- **d.** $181,000.

7. Ashia recently learned that her uncle passed away. Her uncle left her, through his will, what he thought was a vintage car. It turns out that while the car was old, it was not really worth much. Ashia was grateful to be mentioned in her uncle's will. By law, Ashia:

- **a.** must file a testate claim in the state where she lives to obtain the car.
- **b.** may disclaim the property.
- **c.** must motion the court with a residual intention if she disclaims the property.
- **d.** may request the value of the car in cash rather than taking possession of the car.

8. Why do some dislike the probate process?

- **a.** Because probate is public and difficult to maintain privacy for the deceased person and his or her heirs.
- **b.** The court caps the amount a personal representative can earn to $25 per day.
- **c.** The probate process makes it difficult to execute a will efficiently.
- **d.** All of the answer choices are correct.

9. Kimberly and Derek are married. They have two children. Larry is age 14 and enrolled in high school. Terry is age 19 and attends a local community college. Given the family situation, which of the following statements is *true*?

- **a.** The wills for Kimberly and Derek should specifically indicate a guardian for Larry and Terry.
- **b.** Terry needs his own will to transfer property to his parents should he die.
- **c.** Larry should draft his own will, especially if he wants to leave assets to his brother instead of his parents.
- **d.** The wills for Kimberly and Derek should include a guardian clause for any current or future children who are minors.

10. Ruby and Chris were married 3 years ago. At that time, they both wrote wills leaving their assets to the other person. Since that time, they have adopted two children. How can they alter their wills without rewriting the wills entirely?

- **a.** Add a letter of last instructions.
- **b.** Add a holographic appendix.
- **c.** Add a codicil.
- **d.** Add a residual clause.

Adventures in Personal Finance

Short Answer

1. **Calculate** Tyler and Nell have been married for more than 40 years. During that time, they have accumulated many assets. Some of their largest holdings include the following:

- Tyler's Porsche valued at $85,000 and titled in his name.
- A $35,000 Acura that Nell drives, which is titled JTWROS.
- Their $650,000 home that is titled JTWROS.
- Tyler's 401(k) plan that has a value of $925,000 naming Nell as the beneficiary.
- $500,000 term life insurance owned by Tyler, with Tyler as the insured and Nell as the beneficiary.

Based on this information, how much will pass to Nell under Tyler's will?

2. Nigel recently passed away. Before his death, he rewrote his will leaving one-half of his estate—assets less liabilities, expenses, and taxes—to his neighbor. He left the other half of his estate to the Stamp Collectors Society, a nonprofit organization. Although Nigel signed the will, which he drafted himself, the two witnesses included his neighbor and a board member from the Stamp Collectors Society. Before the new will, Nigel left the bulk of his estate to his children in equal shares. Do you believe that his children have enough evidence to contest Nigel's will? Why or why not?

3. During his life, Larry loved throwing parties and living the good life. Right before he died, he drafted a letter of last instructions that required his executor to use assets from his estate to pay for a 24-hour party in New Orleans. He requested a parade, music, and libations for everyone invited. It turns out that the cost of such an event far exceeded the value of Larry's assets. What options does the executor have? Must the executor personally contribute money for the funeral and event, as dictated in the letter of last instructions?

Explore

1. **Writing** **Presentation** One significant disadvantage of the probate process is that it is public information. After probate, anyone can access records regarding what you owned and who received what property. On the other hand, the probate process can be useful because it makes it difficult for people to contest a will in the future. Conduct an Internet search for your local probate court. Start your search at the state level or by county. Write a brief summary of the probate court's mission and duties and describe what other activities the court oversees. Share your findings with your class.

2. **Presentation** Go to the **ibiblio** (a public library and digital archive) website. Use the search function to find the last will and testament of Elvis Presley. Does Elvis's will contain the clauses and provisions that would be valid in most states? Search the site for other celebrity wills. Share any unique bequests that you find in your search with others in class.

3. As described in this topic, the way property is titled can influence how it is transferred. In a few states, married couples can own assets as community property. Conduct an Internet search and locate states that use community property titling. Briefly describe the characteristics of community property and compare these features to JTWROS and tenancy by the entirety.

Expanded Learning Activity

Writing Search the Internet for a template that can be used to create a basic will. Write a brief report describing your experience finding a will and how you felt about creating one. Be sure to include a brief discussion about whether or not you feel having a will, as a tool in your lifetime financial journey, is valuable.

Living Wills and Powers of Attorney

LO 10.5 Describe the purpose of living wills, advanced directives, and powers of attorney.

Diane Anderson's son, Ryan, is almost 40 years old. If you ask one of Ryan's friends, they will tell you that he loves pickles, a funny joke, and good conversation. There is only one problem. Ryan has not spoken, been able to stand, or exhibited any sign of consciousness in more than a decade. For the past 15 years, as a result of brain trauma suffered in an accident, Ryan has lived in what doctors call a persistent vegetative state. Food and water is delivered to him through a tube. Even though he does breathe and sleep, he is unable to respond to visual or oral prompts.

Ryan's situation has caused great mental and financial aguish for his mother. Diane has been forced to balance the financial obligations associated with caring for Ryan with her desire to carry out what she believes to be Ryan's wish, which would be to discontinue life-support functions. This is obviously a sensitive subject, one that has emotional, financial, and moral overtones. In this topic, we discuss how a living will and power of attorney are necessary legal documents for everyone, regardless of age or health, to prevent a similarly difficult situation.

Overview of Living Wills

Definition of a Living Will

A **living will** (or **advanced directive**) is a legal document that is used to inform and direct a physician or hospital about the types of medical treatment someone wants or does not want in case the person becomes incapacitated. **Illustration 10.5.1** shows an example of a living will from the state of Illinois.

- In simple terms, a living will states whether or not medical procedures should be used that will artificially prolong life.
- Without a living will, the decisions regarding life-sustaining treatment are made by the courts. This means that family members have little direct influence on what procedures are used to keep a loved one alive.
- Historically, the courts have tended to be cautious and require that life-sustaining treatment continue indefinitely.

Had Ryan Anderson had a living will that stated he did not wish to live in a prolonged vegetative state, his doctor could have either withheld or withdrawn medical procedures that continue to keep him alive artificially.

When Living Wills Are Used

Living wills come into effect:

- Whenever a person (age 18 and older) is diagnosed as being in a persistent comatose condition—a coma—or in a persistent vegetative state.
  - These are known as terminal conditions, which mean someone's medical disease, illness, or injury is incurable, and without artificial means (such as a feeding tube or respirator) death would result.
  - A physician must certify that the patient has no reasonable expectation for improvement and that death is a natural result.
- These conditions also make communication of medical wishes impossible.

ILLUSTRATION 10.5.1

Living Will Declaration

Living Will

DECLARATION

This declaration is made this ___________ day of ___________________________ (month, year).

I, ___________________________, born on ___________, being of sound mind, willfully and voluntarily make known my desires that my moment of death shall not be artificially postponed.

If at any time I should have an incurable and irreversible injury, disease, or illness judged to be a terminal condition by my attending physician who has personally examined me and has determined that my death is imminent except for death delaying procedures, I direct that such procedures which would only prolong the dying process be withheld or withdrawn, and that I be permitted to die naturally with only the administration of medication, sustenance, or the performance of any medical procedure deemed necessary by my attending physician to provide me with comfort care.

In the absence of my ability to give directions regarding the use of such death delaying procedures, it is my intention that this declaration shall be honored by my family and physician as the final expression of my legal right to refuse medical or surgical treatment and accept the consequences from such refusal.

Signed ____

City, County and State of Residence ____

The declarant is personally known to me and I believe him or her to be of sound mind. I saw the declarant sign the declaration in my presence (or the declarant acknowledged in my presence that he or she had signed the declaration) and I signed the declaration as a witness in the presence of the declarant. I did not sign the declarant's signature above for or at the direction of the declarant. At the date of this instrument, I am not entitled to any portion of the estate of the declarant according to the laws of intestate succession or, to the best of my knowledge and belief, under any will of declarant or other instrument taking effect at declarant's death, or directly financially responsible for declarant's medical care.

Witness ____

Witness ____

Talking about death is not an easy task, but neither is dealing with the stress, expense, and legal hassle of trying to help a loved one who is unable to communicate how he or she wants to live. A living will, therefore, allows you to decide which medical treatments you would prefer if the unthinkable should happen to you. Examples of life-sustaining treatments, or lack thereof, include the following:

- Only water and pain medication.
- Only food.
- No artificial support at all.
- Everything necessary to be kept alive for as long as possible using every available means.

The U.S. Supreme Court has ruled that these decisions are yours to make as part of a valid living will.

Writing a Valid Living Will

To draft and complete a living will:

- You generally must be at least 18 years of age.
- Your living will must be witnessed by persons who are not related to you or by anyone who stands to gain financially by your death. A witness cannot be someone who would need to pay your medical expenses, nor can a witness be your doctor.
- You do not need an attorney to write a living will. Nearly all attorney general state offices provide living will instructions and documents free of charge (see **Helpful Hint**).

HELPFUL HINT

Check your state's attorney general's office to see if the office has a living will template you can complete.

When you enter a hospital for surgery, your physician or hospital administrator may require that you complete a living will form before surgery. Rather than make these life choices at a moment of great stress, it makes sense to draft a living will sooner rather than later. Remember, however, that no one can force you to sign a living will. The choice is yours and is totally voluntary.

Concepts in Action

The following document represents Zelda Sample's living will. The living will is based on a document provided by the **Florida Agency for Health Care Administration**. Unfortunately, Zelda's living will has at least four mistakes that will make the document invalid. Can you find the mistakes and help Zelda rewrite her living will?

> Declaration made this 23rd day of June 2020, I, Zelda Sample, under direction of my husband, make known our desires that my dying not be artificially prolonged under the circumstances set forth below, and I do hereby declare that, if at any time I am incapacitated and:
>
> - I have a terminal condition, or
> - I have an end stage condition, or
> - I am in a persistent vegetative state, and
>
> if my husband has determined that there is no reasonable medical probability of my recovery from such a condition, I direct that life-prolonging procedures be withheld or withdrawn when the application of such procedures would serve only to prolong artificially the process of dying, and that I be permitted to die naturally with only the administration of medication or the performance of any medical procedure deemed necessary to provide me with comfort care or to alleviate pain.
>
> It is my intention that this declaration be honored by my family and physician as the final expression of my legal right to refuse medical or surgical treatment and to accept the consequences for such refusal.
>
> In the event that I have been determined to be unable to provide expressed and informed consent regarding the withholding, withdrawal, or continuation of life-prolonging procedures, I wish to designate, as my surrogate to carry out the provisions of this declaration:
>
> Name: Tom Sample, Husband
> Address: 1234 Example Road, Anytown, USA
>
> I understand the full import of this declaration, and I am emotionally and mentally competent to make this declaration.
>
> Zelda Sample Tom Sample, Witness 1 Roger Atwood, Witness 2

Solution

The first mistake is that Zelda must make the declaration willfully and voluntarily, not under the direction of her husband. Second, her desire must be her own, not "our desires that my dying not be artificially prolonged." Third, her husband cannot determine if there is a reasonable medical probability of recovery. This can only be decided by a physician. Fourth, her husband, because he is named as her designate, cannot witness the declaration.

Other Medical Documents

Healthcare Proxy

There are times when you may be injured or ill but not suffer from a life-ending condition. Let's look at an example.

- If Mary is in a car accident and is unconscious, she will be unable to select the kind of treatment she prefers for her recovery.
- If Mary had appointed an individual, such as a family member, close friend, or professional advisor, to be her **healthcare proxy** (sometimes known as a **power of attorney for health care**, also known as a surrogate or agent), that person can make sure Mary's wishes are known to the medical team.

Of course, this appointment must occur before an accident. Using a healthcare proxy form, you can be as specific as you wish in terms of the power someone else has when making medical decisions for you. The only exception is that someone who holds a healthcare proxy cannot, under any circumstances, dictate life-ending medical measures.

Do-Not-Resuscitate Declaration

Occasionally, people who are terminally ill but still able to competently make their own medical decisions draft a **do-not-resuscitate (DNR) declaration**. This document instructs doctors, hospitals, nursing care facilities, and other health professionals to withhold CPR and other measures that can facilitate breathing if a situation arises when these procedures are recommended. Again, the choice to draft a do-not-resuscitate document is voluntary and a decision you must make for yourself.

Power of Attorney

Suppose you were about to leave for a 6-month adventure in Southeast Asia. Although it is unlikely that anything bad would ever happen when you are out of town, like becoming incapacitated, it makes sense to plan for these rare occasions by designating a power of attorney.

- A **power of attorney (POA)** is a legal document that allows a named person, called an **agent**, to act on your behalf.
- You will probably need to establish a POA, or be named as an agent in someone else's POA, at some point during your lifetime financial journey.
- As such, it is important to understand the different types of POAs that are commonly used.

Types of POAs

You have already learned about a power of attorney for health care (healthcare proxy). **Illustration 10.5.2** shows some of the other common types of POAs you may encounter during your lifetime financial journey:

ILLUSTRATION 10.5.2

Common Types of Powers of Attorney

POA for health care	• Used for medical reasons • POA ends at death
Limited POA	• Agent has limited powers • Terminates with disability or incapacitation
General POA	• Agent has broad powers • Terminates at whichever event occurs first: when its purpose is fulfilled, with disability, or incapacitation
Durable POA	• Agent has specific powers • POA in force regardless of disability or incapacitation
Springing POA	• POA in force only when a predetermined event occurs • Agent may be given limited or general powers

- A **limited POA** allows your agent to act only in specific ways for a limited amount of time. This type of POA would be perfect if you are going on an extended trip where you might need your agent to pay bills for you in your absence. Because the POA is limited, your agent cannot, for example, take action on medical treatment for you.
- A **general POA** provides broad powers, so your agent could theoretically make any nonmedical decision for you. In nearly all cases, limited and general POAs terminate automatically when the purpose of the POA has been fulfilled or if you become disabled or incapacitated.
- A **durable POA** remains in force throughout the duration spelled out in the document, regardless of any disability or incapacitation you might endure.
- A **springing POA** comes into effect ("springs" into force) when some event happens, such as becoming incapacitated. You can determine whether your agent has limited or general powers.

Establishing a POA is easy. **Illustration 10.5.3** shows the **Internal Revenue Service (IRS)** POA that can be used to allow your agent to discuss tax matters on your behalf with the IRS (see **Helpful Hint**).

HELPFUL HINT

Similar documents can be drafted by an attorney or in some cases downloaded from the Internet or from financial service firms.

ILLUSTRATION 10.5.3 **Example of a Limited POA**

Form **2848**

Department of the Treasury
Internal Revenue Service

Power of Attorney and Declaration of Representative

▶ Information about Form 2848 and its instructions is at *www.irs.gov/form2848*.

OMB No. 1545-0150

For IRS Use Only
Received by:
Name ____________
Telephone ____________
Function ____________
Date / /

Part I **Power of Attorney**

Caution: A separate Form 2848 must be completed for each taxpayer. Form 2848 will not be honored for any purpose other than representation before the IRS.

1 **Taxpayer information.** Taxpayer must sign and date this form on page 2, line 7.

Taxpayer name and address	Taxpayer identification number(s)	
Stan Doe 1040 Any Street Anytown, VA22000	000-00-0000	
	Daytime telephone number: 703-555-1212	Plan number (if applicable)

hereby appoints the following representative(s) as attorney(s)-in-fact:

2 **Representative(s)** must sign and date this form on page 2, Part II.

Name and address	
Jim Smith 1065 Any Street Anytown, VA22000 **Check if to be sent copies of notices and communications** ☐	CAF No. 6800-06530R PTN Telephone No. 703-555-4321 Fax No. 703-555-5432 Check if new: Address ☐ Telephone No. ☐ Fax No. ☐
Name and address **Check if to be sent copies of notices and communications** ☐	CAF No. PTN Telephone No. Fax No. Check if new: Address ☐ Telephone No. ☐ Fax No. ☐
Name and address (**Note:** IRS sends notices and communications to only two representatives.)	CAF No. PTN Telephone No. Fax No. Check if new: Address ☐ Telephone No. ☐ Fax No. ☐
Name and address (**Note:** IRS sends notices and communications to only two representatives.)	CAF No. PTN Telephone No. Fax No. Check if new: Address ☐ Telephone No. ☐ Fax No. ☐

to represent the taxpayer before the Internal Revenue Service and perform the following acts:

3 **Acts authorized (you are required to complete this line 3).** With the exception of the acts described in line 5b, I authorize my representative(s) to receive and inspect my confidential tax information and to perform acts that I can perform with respect to the tax matters described below. For example, my representative(s) shall have the authority to sign any agreements, consents, or similar documents (see instructions for line 5a for authorizing epresentative to sign a return).

Description of Matter (Income, Employment, Payroll, Excise, Estate, Gift, Whistleblower, Practitioner Discipline, PLR, FOIA, Civil Penalty, Sec. 5000A Shared Responsibility Payment, Sec. 4980H Shared Responsibility Payment, etc.) (see instructions)	Tax Form Number (1040, 941, 720, etc.) (if applicable)	Year(s) or Period(s) (if applicable) (see instructions)
Income Tax	1040	2017, 2018, 2019

4 **Specific use not recorded on Centralized Authorization File (CAF).** If the power of attorney is for a specific use not recorded on CAF, check this box. See the instructions for **Line 4. Specific Use Not Recorded on CAF** . . . . ▶ ☐

5a **Additional acts authorized.** In addition to the acts listed on line 3 above, I authorize my representative(s) to perform the following acts (see instructions for line 5a for more information):

☐ Authorize disclosure to third parties; ☐ Substitute or add representative(s); ☐ Sign a return; ____________

☐ Other acts authorized: ____________

Common POA Usages

As previously noted, it is quite likely that in your lifetime you will sign one or more limited POAs. Typical reasons to sign a POA include:

- Allowing your attorney, accountant, enrolled agent, or someone else to talk to the IRS about your financial and tax situation.
- When working with a financial advisor, as a way to allow the advisor to manage your portfolio and make investment decisions for you. The use of a limited investment POA makes this happen.
- Helping a relative who is temporarily incapacitated or injured.

As this discussion highlights, there are a lot of things to think about when it comes to planning for your future. Taking steps today to consider how you want to live and meet obligations in a worst-case scenario is one way to make things easier for you and your loved ones.

End-of-Topic Assessment

Multiple-Choice Questions

1. A living will is put into place when:
   - **a.** a person is in a persistent comatose condition.
   - **b.** is nearing death from natural causes.
   - **c.** someone dies.
   - **d.** only when someone cannot breathe or eat.
2. Within an advanced directive, you may:
   - **a.** instruct your physician to continue food and water indefinitely.
   - **b.** instruct the hospital to distribute your property should you become incapacitated.
   - **c.** ask that no life support be used if you are diagnosed as being in a prolonged vegetative state.
   - **d.** both instruct your physician to continue food and water indefinitely and ask that no life support be used if you are diagnosed as being in a prolonged vegetative state.
3. Lini is age 30. She is single and has never been married. Two months ago, Lini was involved in a terrible automobile accident. She was taken to the hospital where it was determined that she was in a long-term coma with little chance of recovery. She did not appoint a healthcare proxy. Who may make legal decisions for Lini while she is in a coma?
   - **a.** Her mother or father.
   - **b.** Her closest living relative.
   - **c.** The court in the district where she is being cared for.
   - **d.** An attorney.
4. At what age may someone draft a living will?
   - **a.** Any age as long as they are competent.
   - **b.** Age 17 or older.
   - **c.** Age 18 or older.
   - **d.** Age 21 or older.
5. You may obtain a living will form at no cost from:
   - **a.** any attorney.
   - **b.** all certified financial accountants.
   - **c.** your state office of the attorney general.
   - **d.** both all certified financial accountants and your state office of the attorney general.
6. Roger is currently living in a nursing home facility. He is 92 years of age and in relatively good health. What document can Roger use to inform the nursing home staff that he would like them to withhold CPR should he stop breathing?
   - **a.** Healthcare proxy.
   - **b.** Do-not-resuscitate declaration.
   - **c.** Springing power of attorney.
   - **d.** Medical directive.
7. Because Marcel and Maria are planning a 1-year mission trip to Africa, they decide to draft a power of attorney naming Maria's father as the person to take care of their financial arrangements while they are away. Maria's father will be known in the document as the:
   - **a.** attorney.
   - **b.** proxy.
   - **c.** director.
   - **d.** agent.
8. Patricia is planning a 3-month trip to Europe. While she is away, she wants to make sure that her bills will be paid and that any other financial obligations that arise will be handled in a prudent manner. Before leaving for Europe, she should do which of the following to achieve her objective?
   - **a.** Draft a living will.
   - **b.** Give her mother a limited power of attorney.

c. Use a springing power of attorney.

d. Draft a financial planning proxy.

9. Max is worried about what will happen if he is traveling and gets in an accident. Should this happen, he would like his aunt to step in to make financial decisions for him until he is able to get well. He should name his aunt in a:

a. durable power of attorney.

b. springing power of attorney.

c. general power of attorney.

d. power of attorney for health care.

10. Preet just learned that he is going to be reassigned for his job to Eastern Europe. The transfer is temporary. Because Preet knows that he is going to return home in a year or two, he has decided to rent out his home. He wants to make sure that someone can take care of his financial issues while he is away, particularly depositing the rent payments and paying bills. His best strategy involves naming his sister in a:

a. durable power of attorney.

b. springing power of attorney.

c. general power of attorney.

d. power of attorney for health care.

Adventures in Personal Finance

Short Answer

1. Describe what is meant by the phrase *terminal condition*.

2. People often get confused about the differences between a will and a living will. The confusion arises because both forms use the term *will* in their name. Briefly summarize the difference between the two documents. Specifically note the purpose of each document.

3. What does a doctor certify for a living will to take effect?

4. Torrey's financial affairs are currently in order, but she wants to make sure that if she became incapacitated, her dad could make financial decisions for her. What type of POA should she draft?

Explore

Writing **Presentation** The importance and legal ramifications of living wills was made public through media exposure of the incapacitation of three women: Terri Schiavo, Nancy Cruzan, and Karen Quinlan. Choose one of these three women as the subject of a brief report to be shared in class. Be sure to address the following issues in your report:

a. The nature of the incapacity.

b. The family members who were affected.

c. What conflicts arose as a result of the incapacitation.

d. The length of time involved in resolving the issue.

e. The ultimate outcome of the case.

f. Your feelings regarding the use of a living will before and after your research.

Expanded Learning Activity

Groupwork Nearly every state's office of attorney general (or secretary of state) provides free fill-in-the-blank living will and healthcare proxy forms. Find the website for your state's attorney general's office or secretary of state's office. Once you have located the site (be sure that you go to a .gov site only), search for "living will" and "healthcare proxy" forms. With the forms in hand, think about how you would answer questions related to the use of specific medical devices and who you would name as your healthcare proxy. Discuss with others in the class the potential consequences involved with electing to remove certain lifesaving medical devices.

Obtaining Help from Financial Professionals

LO 10.6 Explain how professionals can help you navigate your financial journey.

In today's world, it is hard to stay lost when you take a trip. Even if you take a wrong turn or decide to take a detour, most likely the map app on your smart phone will help you to get back on track.

Similarly, you may find yourself momentarily lost during your financial journey. For example, you might find yourself in debt or paralyzed by investment choices. When this occurs, you may just need someone to help you get back on the road to financial success. In this topic, we discuss how financial professionals can help you develop a financial game plan as well as deal with challenging situations.

Overview of Financial Professionals

Types of Financial Professionals

When it comes to financial help, you have several options. **Illustration 10.6.1** provides a brief introduction to some of the financial professionals you are most likely to encounter during your lifetime financial journey.

ILLUSTRATION 10.6.1

Types of Financial Help Providers

Financial planner	• Provides guidance and advice on all aspects of your financial situation; sometimes thought of as your "financial quarterback."
Financial counselor	• Provides advice designed to help you fix past financial problems.
Financial advisor	• Provides advice on one or a few financial topics; tends to be product-focused.
Tax advisor	• Provides specialized advice on tax and IRS questions; prepares tax returns.
Legal advisor	• Provides legal advice and counsel; can draft legal documents.

- If you want comprehensive help with your financial situation, a financial planner may be the right choice. A **financial planner** can act as your "financial quarterback" by providing help and guidance on all aspects of your financial situation.
- A **financial counselor** helps people resolve past financial difficulties. Financial counselors also help those with fewer assets and lower incomes establish a plan for the future.
- **Financial advisors** represent a very broad category that encompasses a wide variety of help providers. Usually, financial advisors help their clients deal with one or just a few issues, such as insurance planning, investment management, or education planning (see **Helpful Hint**).
- **Tax advisors** are specialists who deal with the **Internal Revenue Service (IRS)** and state tax issues. If you need help completing a tax return, a tax advisor can help.
- A **legal advisor** is usually a licensed attorney who is empowered to draft legal documents.

HELPFUL HINT

Financial advisors may also be called investment advisors, investment consultants, insurance agents, insurance brokers, registered representatives, or stockbrokers.

Regardless of whom you turn to for help, keep in mind that the financial professional should always have your best interests in mind when making recommendations.

Determining Financial Professional Competency

Working with a licensed and credentialed professional is one way to ensure that you receive competent help. **Illustration 10.6.2** lists the prominent licenses and certificates that you can look for to help judge a professional's competence.

ILLUSTRATION 10.6.2

Financial Professionals: Credentials and Competence

Financial Professional	Certificates and Licenses	Regulating Body
Financial planner	Certified Financial Planner (CFP®); Chartered Financial Consultant (ChFC®); Personal Financial Specialist (PFS)	Certified Financial Planner Board of Standards, Inc.; The American College; American Institute of CPAs
Financial counselor	Accredited Financial Counselor (AFC®); NFCC-Certified Counselor; Certified Financial Therapist (CFT-I™)	Association for Financial Counseling and Planning Education (AFCPE); National Foundation for Credit Counseling (NFCC); Financial Therapy Association
Financial advisor	Registered Investment Adviser (RIA); Registered Representative (Series 7); Insurance Agent or Broker	U.S. Securities and Exchange Commission or state securities office; Financial Industry Regulatory Authority (FINRA); licensed at the state level
Tax advisor	Certified Public Accountant (CPA); Enrolled Agent	American Institute of CPAs; Internal Revenue Service
Legal advisor	Attorney	Licensed at the state level

Remember that having letters behind a professional's name does not eliminate the risk that he or she may not have your best interest in mind. The best policy is to always check to make sure any financial professional you work with:

- Is properly licensed with the appropriate government agency or nongovernmental regulatory body.
- Has a clean disciplinary record.

Now that you have a sense of where to turn to for help and how to make sure that the person is well qualified, let's see next how using a financial professional might work in practice.

Financial Help: Two Approaches

When it comes to seeking help about your general financial situation, you have two broad categories of professionals to choose from: a financial counselor or a financial planner (if you need product, tax, or legal advice, you will want to turn to a financial advisor, tax advisor, or an attorney, respectively).

- As shown in **Illustration 10.6.3**, the primary difference between a financial counselor and a financial planner is the way these professionals view their clients' situations.
- Financial counseling is most effective in helping people respond to short-term crises and challenges.
- Financial planning is a proactive process that seeks to address long-term issues and challenges long before they become an immediate issue.

ILLUSTRATION 10.6.3 **Financial Counseling and Financial Planning Compared**

Financial Counseling

Consider Jack, who a few years ago started his own small business out of his parent's house. The business did not do well, so Jack decided to get another full-time job plus take college classes. Jack is now in the position of trying to work full-time, get good grades, and repay the debts that he incurred while trying to make his business a success (he owes money on four different credit cards). Jack needs immediate help.

Jack should meet with a financial counselor. Financial counselors help their clients establish spending plans and get out of debt more quickly. Here is how Jack received help.

1. Jack decided to contact a **credit counseling agency**, which provides individual assistance when negotiating with creditors and simplifying payments to creditors.
2. Jack went online to the **Council on Accreditation**'s website to find out if the credit agency he was planning to call was legitimate and in good standing. He also checked to see if the agency was part of the **National Foundation for Credit Counseling** network (**NFCC**) and which of the staff were either NFCC-certified counselors or Accredited Financial Counselors®.
3. Once he was sure the counseling firm was legitimate, Jack contacted the credit counseling company and spoke with a financial counselor.
4. The financial counselor was able to help Jack negotiate with his creditors and develop an effective **spending plan** (sometimes called a **debt repayment plan**).
5. The financial counselor recommended some additional resources to Jack that he could use as a student to help with his current financial situation.
6. After five meetings, the financial counselor decided that Jack was well on his way to managing his finances without any additional guidance.

Financial Planning

HELPFUL HINT

It is not uncommon for someone to work with a financial planner for two or more decades.

Whereas financial counseling helps people fix current or past problems, **financial planning** usually focuses on helping individuals, families, and small business owners achieve future goals. Additionally, instead of a short-term process, financial planning generally results in a long-term client-planner relationship (see **Helpful Hint**).

Let's look at Sarah's situation. Sarah just graduated from college and is starting a full-time job. She wants to begin saving for her long-term financial goals and is looking for some help. Here is what she did.

1. Sarah decided to call a financial planner.
2. Sarah used the free online financial planner search tools offered by the **Certified Financial Planner Board of Standards, Inc**. She also used the **Financial Planning Association** website to search for a local financial planner.
3. Sarah located a Certified Financial Planning (CFP®) professional, who meets regularly with her to talk about investing, taxes, retirement, insurance, estate issues, and other topics.
4. The CFP® professional also manages a portion of Sarah's retirement account for a fee.
5. Their ongoing relationship adds value to Sarah's life by helping Sarah make financial decisions and by providing peace of mind.

In Jack's and Sarah's cases, both were able to find the financial professional help they needed. However, to make sure they received the best help for their money, Jack and Sarah needed to check two other things: compensation method and possible conflicts of interest.

Navigating the Financial Advice Marketplace

How can you determine whether a financial professional is competent? For starters, it is reasonable to conclude that an old high school friend who did not go to college but recently got a job with a life insurance company may not be as competent as a credentialed professional.

Another way to evaluate a financial professional's background is to ask about the way she or he is compensated.

Compensation Options

Before calling a financial professional, you need to know how financial professionals are compensated. Rarely are valuable services free. There are three primary ways in which financial professionals are compensated.

1. **Commission**, which is an amount paid to the financial professional *from a financial firm*, such as a mutual fund or insurance company, based on the percentage of the sales price of a product, such as an investment product, mutual fund, or insurance policy. Nearly all insurance agents and stockbrokers (sometimes called *registered representatives*) earn a large portion of their income from commissions. Typically, financial professionals who are compensated on this basis receive a sizable upfront commission in the year that you purchase a product. In subsequent years, they receive smaller commissions, referred to as trailing commissions, if you continue to pay for the product.
   - For example, a financial advisor might recommend a mutual fund to a client. If the mutual fund charges a 5% commission (called a **load**) and the client buys $10,000 in fund shares, the advisor and his or her firm will be paid $500 ($10,000 × 5%) directly from the mutual fund company.
   - After the commission has been paid, $9,500 will be invested in the fund. The advisor will then receive a small amount from the fund company (¼ of 1% or $25) every year thereafter.
2. **Fee**, which is typically paid to the financial professional *from the client*. Fees can be based on an hourly charge or, more typically, based on the amount of investment assets managed by the financial professional. Fee-only financial planners are the most likely to charge only a fee for advice.
   - A typical fee for managing a portfolio is 1% of assets under management. For example, a financial professional will earn $100 for every $10,000 in assets managed ($10,000 × 1%). This fee is paid directly by the client every year that the financial professional provides a service. The financial planner will earn more as the portfolio goes up in value.
   - A fee-only professional who charges by the hour may bill at a rate ranging from $100 to $300 per hour, depending on the complexity of the issue.
3. **Combination of commissions and fees**, so that the total costs paid tend to be the same as for a commission-based advisor, but consumers are given a choice when paying for advice. These compensation structures are sometimes known as fee-based and fee-offset approaches.

Illustration 10.6.4 compares these compensation approaches to commission and fee methods.

ILLUSTRATION 10.6.4

Types of Compensation Methods Compared

Commission	Fee	Commission and Fee
Professional paid by investment company or insurance company	Professional paid by client	Professional paid by firm and client
Pay based on value of sale	Hourly or asset fee	Fees typically offset by commissions
Typical cost for a $10,000 portfolio is $250 to $700 (one time)	Typical cost for a $10,000 portfolio is $100 to $300 (ongoing)	Typical cost for a $10,000 portfolio is $250 to $700 (one time and ongoing)

When thinking about compensation issues, there is no one "best" way to pay for financial advice. Although most consumer-affairs experts argue that a fee structure is best because it aligns your financial professional with your interests, what is most important is that the financial professional, however paid, discloses and avoids conflicts of interest.

Conflicts of Interest

The world of financial advice is filled with conflicts of interest. A **conflict of interest** occurs when a financial professional benefits financially to an extent that exceeds the value provided to the client. Stated another way, a conflict of interest exists any time an advisor makes money based on a recommendation that is not in the best interest of his or her client. Here is an example.

- Let's say that a financial advisor earns a commission on the sale of mutual funds.
- If there are no-load mutual funds—funds that do not charge a commission to buy shares—that perform as well as or better than the recommended load fund (commission-charging mutual funds) and the advisor fails to disclose this fact, the advisor may have a conflict of interest because he or she is ultimately paid to sell the load fund.

HELPFUL HINT

As long as an advisor fully discloses all conflicts of interest, then purchasing a suitable product should be just fine.

Stockbrokers, for instance, face conflicts of interest on a daily basis. Brokers who provide non-retirement planning advice are only required—by law—to provide their clients with a suitable product, not necessarily the best product. This is known as the **suitability standard of advice**. There are reasons to be cautious when working with someone who follows only a suitability standard of advice (see **Helpful Hint**).

- As a consumer, it is never fully possible to know if a product or service recommendation is being made in your best interest or if the advisor stands to unduly gain financially from the transaction.
- This means that consumers who work with advisors who earn commissions must take precautions to ensure that they fully understand how their advisor is paid.
- If an advisor is unwilling to disclose how he or she is paid, this is a warning sign. You should seek help from someone else.

Some financial professionals follow a **fiduciary standard of advice**, which requires a financial professional to act in the best interest of the client at all times and fully disclose any and all conflicts of interest. The following is a list of financial professionals who must follow the fiduciary standard of advice:

- Any financial professional who provides advice regarding retirement plans—such as a 401(k), 403(b), or IRA rollover—must follow a fiduciary standard when making retirement plan recommendations.
- Anyone who markets their practice as fee-only must act as a fiduciary at all times.
- Attorneys must follow a fiduciary standard.
- Some credentialing organizations also require certificants to follow a fiduciary standard. For example, all AFC® and CFP® practitioners are required to disclose any conflicts of interest to their clients and disclose how they are compensated.

Planning your financial journey can be a complicated, yet exciting, adventure. Knowing if and when you need help, plus how to obtain it, can help to ensure that your journey is successful.

Concepts in Action

Kolton recently inherited $250,000. He is unsure about the tax liability he might have or how to manage his new wealth. He knows that he would like to pay down some of his debt (both credit cards and student loans), but beyond that he does not know what to do next with the money. Given that Kolton is a novice when it comes to personal finance topics and issues, to whom might he turn for help? What types of conflicts of interest might exist if Kolton turns to someone who charges a commission for help? What types of conflict of interest might he face if he turns to a fee-only financial planner for help?

Solution

Kolton has many options when it comes to receiving good financial advice. At the top of the list is a financial planner. A financial planner can answer all of his tax questions and provide advice on how to invest the inheritance for the future. Many potential conflicts of interest exist if he turns to a financial professional who charges a commission. For example, given his low level of knowledge, Kolton can never be sure if the products and advice being sold are truly the best for his situation or those paying the highest commission. Fee-only financial professionals also have potential conflicts of interest. For instance, nearly all fee-only financial planners charge a fee of close to 1% of assets under management. In Kolton's case, that would be about $2,500 per year just to receive advice ($250,000 × 1%)! Finally, a fee-only planner may not recommend that a client pay down debt, for instance, because this will reduce the assets under management, which will then reduce the level of income the planner earns.

End-of-Topic Assessment

Multiple-Choice Questions

1. Why might Sheila seek the help of a financial advisor?

I. She lacks the time to manage her own investments.

II. She lacks the knowledge to make informed decisions.

III. She lacks the confidence to implement strategies.

a. II only.

b. III only.

c. I and III only.

d. I, II, and III.

2. Financial counselors tend to be ________________ oriented, whereas financial planners tend to be ________________ oriented.

a. past; present

b. present; past

c. past; future

d. future; present

3. Jorge and Midge have been married for 23 years and have raised three children. Recently, they have been helping their grown children pay for student loans and other purchases, including homes and cars. As a result, Jorge and Midge have large outstanding credit card bills and other loans. They are having trouble balancing their monthly budget. Which of the following professional advisors is best equipped to help them deal with their cash flow situation?

a. Stockbroker.

b. Certified financial planner.

c. Insurance agent.

d. Accredited financial counselor.

4. **Calculate** Kirby just inherited $250,000. He would like to hire a financial advisor to provide financial advice and to manage the inheritance. Kirby has interviewed two potential advisors. The first person indicated that he would not charge for his advice but would charge a 4.50% commission on any mutual funds purchased when managing the $250,000. The second person indicated that she would charge $2,500 to write a financial plan and 1% of any asset she manages. Which advisor should Kirby choose if he wants the $250,000 managed and his upfront expenses minimized?

a. The first advisor because there is no planning fee.

b. The second advisor because the total first-year cost is $5,000.

c. The first advisor because the total first-year cost is $5,000.

d. Because the cost is approximately the same, either advisor could be selected.

5. Johnny would like to hire a financial advisor. A financial advisor Johnny is considering said that he would not charge for his advice but would charge a 4.50% commission on any mutual funds that Johnny purchased. The financial advisor that Johnny is considering is using what type of compensation model?

a. Fee-only.

b. Fee-based.

c. Fee-offset.

d. Commission.

6. Erika would like to hire a financial advisor. The financial advisor that she has been considering indicated that she would charge $2,500 to write a financial plan and 1% of any asset she manages. The financial advisor that Erika is considering is using what type of compensation model?

a. Fee-only.

b. Fee-based.

c. Fee-offset.

d. Commission.

7. Thurmond would like to hire a financial advisor. He has interviewed two potential advisors. The first person indicated that he would not charge for his advice but would charge a 5.0% commission on any mutual funds purchased when managing Thurmond's investments. The second person indicated that she would charge a flat fee of 1% of any asset she manages. Who is more likely to have a negative conflict of interest?

a. The second advisor because her income increases as the assets under management increases.

b. The first advisor because his income goes up as he sells more mutual funds.

c. The second advisor because she charges a flat fee when writing a financial plan.

d. The first advisor because his commission rate is fully disclosed.

8. Molly is interested in ensuring that the advice she receives is guided by the fiduciary standard. She has talked to two different financial advisors. One advisor is paid based on a set fee based on the amount of managed assets. The other financial advisor has not made it clear to Molly how he gets paid, but he has assured her that she will not have to pay anything for his services. Knowing nothing else about the advisors other than how they are compensated, which advisor is more likely to follow the fiduciary standard?
   - **a.** The second advisor because he follows a suitability approach.
   - **b.** The first advisor because she does not charge a commission.
   - **c.** The first advisor because she charges a commission.
   - **d.** Both advisors are following the fiduciary standard.

9. Consumers who are interested in minimizing conflicts of interest and avoid being ripped off should work with a financial advisor who:
   - **I.** fully discloses any and all fees.
   - **II.** fully discloses any potential conflicts of interest.
   - **III.** uses mutual funds over individual stocks.
   - **a.** I only.
   - **b.** III only.
   - **c.** I and II only.
   - **d.** I, II, and III.

10. Which financial services professional is required to recommend a product that is not only suitable for a client but is also the best product in the marketplace?
   - **a.** A registered representative.
   - **b.** A registered financial planner.
   - **c.** A registered investment adviser.
   - **d.** A certified planning counselor.

Adventures in Personal Finance

Short Answer

1. Match the following organization with the associated credential or license.

- **a.** CFP®.
- **b.** Registered representative.
- **c.** Registered investment adviser.
- **d.** AFC®.
- **e.** Certified counselor.

1. Financial Industry Regulatory Authority.
2. National Foundation for Credit Counseling.
3. Certified Financial Planner Board of Standards, Inc.
4. U. S. Securities and Exchange Commission or state securities office.
5. Association for Financial Counseling and Planning Education.
6. Council on Accreditation.

2. Working with registered representatives (stockbrokers) can be beneficial. However, consumers must guard against being sold what is suitable for them instead of what is best for their situation. What can consumers do to get the best advice possible?

3. **Writing** Certain products, such as life insurance, will always have an associated commission that is paid to the life insurance agent or broker. Is buying life insurance from someone who makes a commission a positive or a negative? Write a short response discussing your feelings and opinion. Summarize your review by including information that anyone should know when working with a commission-based salesperson.

Explore

1. Identify a financial counseling agency or individual financial counselor in your area. What credentials does that person/agency hold?

2. Use the **CFP Board of Standards, Inc.** or **FPA** website search tool to look up financial planners in your area. Identify at least five financial planners listed by these sites. For each of these financial planners, go to the **U.S. Securities and Exchange Commission** website or broker check website and check to see if any of the individuals have ever had a disciplinary action taken against them and whether it has been resolved.

Expanded Learning Activity

As you can imagine, thousands of people every day have questions about their personal financial situation. As a result, a real career opportunity exists for those who would like to help others create a financial plan. Visit the **Department of Labor** *Occupational Outlook Handbook* website and search for "personal financial advisors" (this term includes *financial planners*). Answer the following questions based on your review of the website: (1) What is the job outlook for personal financial advisors? (2) How does the median pay for these professionals match with national averages? (3) What is the work environment like? (4) How does someone go about becoming a personal financial advisor? Based on your research, how likely is that you would consider becoming a personal financial advisor in the future?

End-of-Chapter Review and Problem-Solving

Learning Objectives Review

10.1 Discuss the need and responsibility for retirement planning. It is never too early to start thinking about retirement, even if you are still in college. You need to account for two important trends when planning for retirement. First, people are living longer, which means you will need to save more to pay for expenses when you are no longer working. Second, the responsibility for saving is totally yours. As discussed in this chapter, few people today have a guaranteed source of retirement income. As such, an important component of your lifetime financial journey will involve contributing to a defined contribution plan through your employer, supplemented by savings in IRAs and other investments. By starting early, you can accumulate a sizable nest egg by putting aside a portion of each dollar earned. If you wait to start saving for retirement, the amount you will need to put away each pay period will need to be much higher. The bottom line is this: start saving for your future self today.

10.2 Explain how to use individual retirement accounts (IRAs) to save for the future. Individual retirement accounts (arrangements) (IRAs) are one of the most important tools available to investors who want to save for retirement. IRAs can be established either as a traditional IRA or as a Roth IRA. A traditional IRA allows some contributors—usually those with limited access to employer-provided retirement plans and those with lower incomes—to deduct contributions from their federal income tax return. All earnings within the account grow tax-deferred. At retirement, but no later than age 70½, distributions are taxed. A Roth IRA also offers tax-deferral of earnings; however, with a Roth IRA, contributions are never tax-deductible. Roth IRA distributions may be tax-free if certain requirements are met.

10.3 Identify the multiple ways property can be held and transferred. There are multiple ways that you can hold property, including fee simple, tenancy in common, JTWROS, tenancy by the entirety, community property, and through trusts. How you title and hold property helps shape the future use and distribution of what you own. Property titling and ownership issues are influenced by your current marital status, the amount of control you want to retain in your property, and ultimately the level of privacy you hope to achieve at your passing. As highlighted in this chapter, property ownership issues are an essential element of your personal financial plan.

10.4 Explain the use of wills as a tool to transfer property after death. Planning for asset transfer is something nearly all adults need to think about, particularly if someone is married or has children. Property can be transferred by title, contract, or will. A will is a legal document that dictates your wishes for distributing your property after death. Anyone older than age 18 may draft his or her own will. Those who die without a will (intestate) will have their property distributed according to the laws of the state in which they live. This can be time-consuming and expensive. A will helps reduce hassles and ensures that your desires are executed in the event of death.

10.5 Describe the purpose of living wills, advanced directives, and powers of attorney. One of the most devastating events in a family's life involves having a family member injured and incapacitated. The emotional burdens and financial expenses associated with incapacitation can be crippling for parents, siblings, and relatives. Living wills, advanced directives, and powers of attorney are relatively easy to create and can be used to ensure that your healthcare wishes and desires are carried out in a legal and humane way. A power of attorney (POA) is a particularly useful document. POAs can be used for a number of financial purposes, including the limited or general management of resources and healthcare issues that do not involve life-or-death decisions.

10.6 Explain how professionals can help you navigate your financial journey. Although all the basic elements needed to create your own financial plan—a roadmap for your financial journey—are imbedded in this text, there may be times when you need help addressing financial questions and concerns. Fortunately, you have multiple options when it comes to getting financial help. If you find that you do not have the time or interest to manage your household financial situation, you might consider hiring a financial planner. Financial planners act as a "financial quarterback." They have the expertise to manage nearly all aspects of your financial situation. If you need specialized help, you also have lots of options, including financial counselors, financial therapists, insurance agents and brokers, stockbrokers, CPAs, enrolled agents, and attorneys. Regardless of where you seek help, it is important to make sure that the financial professional is competent and that he or she has your best interest in mind at all times.

Continuing Case: Tarek's Financial Journey

Now that Tarek is married, he wants to make sure that he and his wife have appropriate estate planning documents in place. Right now, neither Tarek nor his wife Samantha have drafted any legal documents. This is a worry for Tarek because he has several wishes he would like carried out should he die or become incapacitated. For example, if he were to die, he would like to be buried in his hometown, which is in another state. Also, if he were to be diagnosed as being in a prolonged vegetative state, he would prefer to be removed from all artificial lifesaving measures, except food and water. Additionally, he and Samantha are currently shopping for a new car for her. Tarek is thinking of selling his motorcycle, which is owned fee simple, and using the proceeds as a down payment for the new car. Tarek does not know how to title the new car.

Instructions

Help Tarek answer the following questions.

a. If Tarek and Samantha do not write wills and one or both were to pass away, how will the distribution of their assets be decided?

b. How should Tarek notify Samantha of his burial desire? Does Samantha need to follow Tarek's wish?

c. Who might Tarek name as the executor of his estate?

d. If Tarek and Samantha purchase a car next week, how can they title the car so that they are both shown as an owner with a right of ownership at the death of the other spouse? Is there a titling method that they should not use?

e. If Tarek were to pass away before selling his motorcycle, would Samantha automatically receive the motorcycle?

f. What document does Tarek need to draft to make his wishes regarding incapacitation known?

g. If Tarek names Samantha as his healthcare proxy using appropriate forms, can she direct the hospital or Tarek's physician to implement Tarek's incapacity wishes?

Calculating the Cost of Life's Financial Journey

Cheyenne and Scott Timberlake have been married for 20 years. They are excited because over that time they have managed to save $350,000. Right now, the entire amount is spread out among four bank accounts. Unfortunately, Cheyenne and Scott are not making much interest on their savings. They know that they need to be proactive in making their money work for them. As such, they have decided to hire a financial professional to help manage their money in a more effective way. After searching the marketplace and interviewing several potential financial professionals, they have narrowed their choice to the following three individuals.

	Advisor 1	**Advisor 2**	**Advisor 3**
Compensation method	Commission	Fee	Fee + commission
Quoted costs	• 4% initial cost to purchase investments • 0.50% annual management fee beginning in second year	• 1% annual fee of asset under management	• $7,500 first year planning fee • 2% cost to purchase investments • 0.10% annual management fee beginning in second year
Average historical rate of return on similar accounts	8.50%	8.0%	7.50%

Instructions

Use this information to answer the following questions.

a. Calculate how much Cheyenne and Scott will pay in first-year expenses for each advisor.

b. Assume that Cheyenne and Scott pay the commissions and fees directly from their $350,000. If they hire an advisor and invest their savings on January 1, how much will they have in their account at the end of the year, assuming they can earn the advisor's average historic rate of return?

c. Calculate how much Cheyenne and Scott will pay in second-year expenses for each advisor (base your estimate on answers to part b).

d. Assume that Cheyenne and Scott pay the annual management fee on January 1 of each year directly from their account. Determine which advisor they should choose if their goal is to maximize the value of their investments after 7 years. What does your analysis indicate regarding initial expenses and ongoing management fees?

Planning for the Future

Raul owns real estate in two states: his personal residence in Georgia and a small condominium in a coastal town in South Carolina. After reading about probate, he has several concerns. First, he is worried that all of his personal financial information will become public if his estate goes through the probate process. Second, he is concerned that his executor will need to deal with the probate courts in both Georgia and South Carolina. He is worried that this could get expensive, in addition to being a hassle. Third, he is tired of having to worry about the many ways to title each piece of property.

Instructions

Help Raul answer the following questions given his worries and concerns.

a. As a single person, Raul's home and condo are titled fee simple. Is he correct that, if he were to pass away, the property would need to go through the probate system? Why or why not?

b. What would be an advantage and a disadvantage of adding his sister as an owner of each piece of property and titling the real estate JTWROS?

c. If Raul wants to maintain 100% control over both pieces of property and avoid probate, what should he do?

d. Raul is considering establishing a trust to own his real estate and other titled property. He needs to name three individuals (or organizations) in the trust document. Identify these three individuals (organizations).

Continuing Project: Your Financial Journey

Go to WileyPLUS for complete details and instructions.

Boldface terms are cross-referenced within this glossary; *italic* terms are not.

12b-1 fee An annual fund marketing expense that is passed on to shareholders in a mutual fund. (p. 8-33).

60-day rollover The amount of time you have if a distribution from a retirement plan is paid directly to you via check or money deposited into your bank account to "rollover" the distribution (or a portion of the distribution) to the IRA to avoid paying penalities. (p. 10-17).

529 Plan (or **Qualified Tuition Program**) A tax-deferred education savings plan that allows tax-free distributions and also allows the money to be controlled so that it can only be used for college expenses. (p. 7-46).

account set-up fee A one-time fee associated with opening a credit card. (p. 5-43).

accredited investor Someone who has earned income that exceeded $200,000 (or $300,000 together with a spouse) in each of the prior 2 years and reasonably expects the same for the current year; and a net worth more than $1 million, either alone or together with a spouse (excluding the value of the person's primary residence). (p. 8-84).

actively managed mutual fund A professionally managed mutual fund (an investment that pools money from many investors) that attempts to provide superior risk-adjusted returns relative to the investment market. (p. 8-30).

activities of daily living (ADLs) Basic activities such as being able to bathe yourself, fix your own food or eat it by yourself, dress yourself, use the bathroom on your own, or get out of bed without assistance. (p. 9-53).

adjustable rate mortgage (ARM) A mortgage loan structure where the interest rate changes periodically (usually every year, but the initial years of the ARM may have a fixed interest rate). (p. 6-46).

adjusted gross income (AGI) Income amount reported on Form 1040 after applying allowed deductions. (pp. 4-20, 7-30).

advanced directive (or **living will**) A legal document that is used to direct a physician or hospital about the types of medical treatment someone wants or does not want in case the person becomes incapacitated. (p. 10-37).

Advanced Premium Tax Credit A subsidy from the federal government that helps lower the cost of health insurance. Can be used during the entire year to lower the cost of monthly premiums on health insurance plans that are purchased through the state or federal health insurance exchanges. (pp. 4-35, 9-16).

ad valorem taxes Property taxes specifically imposed annually on the value of your vehicle. (p. 4-5).

after-tax basis The value of an asset after accounting for taxes already paid. (p. 7-27).

agent The person named in a legal document **[power of attorney (POA)]** to act on the behalf of another person. (p. 10-40).

alternative financial system A growing lending industry of lenders that tend to be convenient to use but much more expensive. These types of lenders, such as check cashers, **money order providers, pawn shops, payday lenders, auto title loan lenders**, and **rent-to-own** retailers, do not typically rely on an individual's credit report when making a loan decision. Instead, firms operating in the alternative financial system marketplace focus on making loans that are collateralized either with an asset or access to a borrower's bank account. (pp. 5-19, 6-3).

American Depositary Receipts (ADRs) Represent one or more shares of a foreign stock. (p. 8-48).

American Opportunity Tax Credit Helps offset some of the costs of higher education; applies to the first 4 years of postsecondary education and available to whomever claims the student as a personal exemption on his or her tax return. The maximum credit is $2,500 per eligible student; however, up to 40% of the credit ($1,000) is refundable. (pp. 3-42, 4-35).

amortization The process of paying off a current loan or debt, such as a mortgage or a car loan, using a series of payments over time. (p. 2-14).

amortization table Shows the amount of interest and principal associated with each fixed loan payment over the entire loan term. (p. 5-24).

amortized loans Traditional loans; the borrower makes fixed payments for a set period of time until the loan is paid off. (p. 5-41).

amortized payment A payment of the same amount for a set number of months or years, such as for a car loan or mortgage. (p. 2-23).

annual fee A fee charged once per year by some credit-card companies to keep a credit card active. (p. 5-43).

annual percentage rate (APR) A broad measure of the cost of borrowing based on the annual sum of the periodic interest rates applied to the account. The APR does not consider the effect of compound growth. APRs sometimes associated with a credit card include **introductory APR, balance transfer APR, cash advance APR,** and **penalty APR**. (pp. 2-6, 5-25, 6-4).

annual percentage yield (APY) A broad measure of the interest rate that accounts for compound growth or the additional interest that your interest earns. (p. 2-7).

annual renewable term Life insurance that needs to be purchased yearly. (p. 9-29).

annuity A series of equal payments. (p. 2-13).

any occupation A strict disability definition used by the Social Security Administration based on three requirements: (1) an individual cannot perform the work as before the accident or illness, (2) the individual cannot readjust his or her skills because of the medical condition, and (3) the disability is expected for at least one year or until death. (p. 9-21).

application deposit Used in case your application is accepted but you decide not to move in to your rented dwelling. If you are rejected by the landlord, you will receive this deposit back. (p. 6-36).

appraisal fees Cost for a written document describing the value of property. (p. 6-45).

appreciating assets Assets that will increase in fair market value over time. (p. 2-31).

ask price The lowest price at which a seller will sell an asset, such as a share of stock or a collectible. (pp. 8-5, 8-75).

asset Something of value you own. (pp. 1-9, 2-29).

asset allocation An approach in which you include different investments into one portfolio. (p. 8-18).

asset allocation funds Mutual funds that invest in several other mutual funds based on a predetermined ratio of stocks (equities) and bonds. As such, they can be designed to better match individual investors' risk tolerance. (p. 8-35).

attractive nuisance Any addition to your property that tends to increase the premium level of a homeowner's insurance policy (such as swimming pools, basketball courts, and large swing sets or playgrounds) because such additions are notorious for causing liabilities and losses. (p. 9-49).

auctions A public sale in which goods (sometimes with limited or no inspection) are sold to the highest bidder. (p. 8-74).

Automated Clearing House (ACH) A nationwide network of banks, credit unions, and other depository institutions that send each other credit and debit transfers electronically. (p. 5-14).

avoidance A risk management and insurance term that describes a way to minimize the likelihood of negative outcomes. (p. 9-4).

back-end mortgage qualification ratio The sum of payments (PITI) made on a mortgage plus all other consumer debt payments divided by total household income. The ratio should be equal to or less than 36%. (p. 6-43).

bad debt Money that is borrowed to buy something that either goes down quickly in value or is consumed immediately. (p. 2-33).

balance sheet A document to organize what you own and what you owe. (p. 2-29).

balance transfer APR Applies to balances transferred from one credit card to another credit card. (p. 5-43).

bank routing numbers The nine-digit code on the lower left of the check (in combination with a bank account number) that acts as a payment trail for transferred funds. (p. 5-4).

bankruptcy A legal process through which an individual's assets or income is divided among creditors and any remaining unpaid debts are forgiven. (pp. 3-21, 5-27).

basis The price you pay when you buy a capital asset. (p. 3-33).

BEACON® Score Equifax's version of a FICO score. (p. 5-34).

behavioral economists Professionals who study how people go about making financial decisions. (p. 1-34).

beneficiary The person or entity who receives an asset at the death of another person. Also refers to a person who receives distributions from a trust while alive. (pp. 9-28, 10-24).

benefit limit Specifies the maximum amount the policy will pay. (p. 9-54).

benefit period Specifies the length of time benefits will be paid. (p. 9-54).

bequest The irrevocable and voluntary transfer of property to another party after death through a will. (p. 10-30).

bid price The highest price a buyer will pay to purchase a specified number of shares of a stock at a specific time. (pp. 8-5, 8-75).

blank endorsement Your name signed on the back of the check. (p. 5-4).

bonds Contractual loans to corporations and governments. (p. 8-18).

bonus A supplemental payment usually based on performance or meeting certain production or sales requirements. (p. 3-11).

bouncing a check Writing a check for an amount greater than your account balance; also known as an **overdraft**. (p. 5-5).

breakpoints Some mutual funds reduce the front-end load as the size of the investment increases. (p. 8-34).

brokerage account A prefunded arrangement between you and a broker–dealer firm that allows you to buy and sell investment assets. (pp. 8-10, 8-61).

budget A resource management tool that keeps spending in line by tracking how much you will earn and spend in the future. (p. 2-38).

business risk The possibility that a company in which you invest will be forced to close. (p. 7-3).

buy stop Sets a limit on how much you are willing to pay. (p. 8-63).

cafeteria plan An IRS-approved plan maintained by your employer that provides employees with several tax benefits. If you have access to a cafeteria plan, you must be given access to at least one taxable benefit (such as cash) and one qualified benefit (such as an FSA). (p. 9-18).

capital The money used to start or expand a business. (p. 3-22).

capital assets Things that you own or use for personal or investment purposes, either tangible or intangible, and are defined by the IRS by what they are *not*: They are not used in your business (such as a laptop or a car); they are not a result of your normal business activities (like accounts receivable at a business); and they are not associated with creative works (e.g., copyrights of songs and movies) of the people who created them. (pp. 3-33, 4-28).

capital gain When the difference between what an asset is sold for and what the asset was purchased for (plus transaction costs) is positive. (p. 3-33, 8-6).

capital gain income Income generated from the sale of an asset; typically, capital gains are taxed at a lower rate than ordinary income. (p. 4-28, 8-6).

capital loss If you sell an asset for less than what you paid for it. (pp. 3-33, 8-6).

cash account The most common type of **self-directed brokerage account**; requires you to pay in advance for all securities purchased. (p. 8-62).

cash advance Service provided by credit card companies that allows cardholders to withdraw cash. (p. 6-10).

cash advance APR The interest rate that applies to cash advances accessed from the credit card. (p. 5-43).

cashier's check A check from a bank or other financial institution that can be purchased by paying the amount of the check plus a service fee. (p. 5-4).

cash-value life insurance policy Life insurance that blends **pure term insurance** with a savings option. The cash value grows on a tax-deferred basis, you may borrow from the account without a credit check, and like all life insurance, benefits paid to your beneficiary are received on a tax-free basis. (p. 9-30).

certificate of deposit (CD) A savings product that is generally purchased with one lump-sum dollar amount. CDs are different from savings and checking accounts in that CDs restrict withdrawals from the account until some future date, referred to as the **maturity date**. (p. 7-22).

certified check A personal check issued by a bank that guarantees the amount will be paid; the bank charges a fee for this type of check. (p. 5-4).

certified financial planner (CFP®) Designation given to individuals who complete the CFP Board's ongoing certification requirements. (p. 8-88).

check A written order to your bank to pay a third party (payee). (p. 5-3).

checking account reconciliation The process of comparing your check register with your monthly bank statement. (p. 5-6).

check-to-electronic conversion With this hybrid method, payment with a paper check is immediately converted at the point-of-sale terminal to an electronic form of payment. (p. 5-15).

Child Tax Credit A credit against a tax liability based on the number of qualifying children, under age 17, living in a taxpayer's household; $1,400 per child is potentially refundable. (pp. 3-42, 4-35).

Class A shares Mutual funds that charge a front-end sales load but tend to have a lower 12b-1 fee and lower annual expenses than other commission-based mutual funds. (p. 8-33).

Class B shares Mutual funds that typically do not have a front-end sales load. Instead, they charge a deferred sales load that is paid when you sell the fund. Most require you to pay an annual 12b-1 fee and a higher annual management fee. The deferred load often decreases the longer you own the fund. (p. 8-34).

Class C shares Mutual funds that charge a lower commission to purchase shares but generally charge a higher annual 12b-1 fee and other annual expenses. (p. 8-34).

closed-end credit Traditional loans; that is, if all payments are made on time, the borrower knows exactly when the loan will be paid in full. (p. 5-41).

closing The point when property is formally sold and transferred from the seller to the buyer and when all closing costs must be paid. (p. 6-46).

closing costs All fees and related expenses associated with the purchase of a home, including mortgage origination fees, points, legal costs, taxes, transfer fees, and other expenses. (p. 6-45).

COBRA Consolidated Omnibus Budget Reconciliation Act; health insurance that is available to anyone who works for an employer with 20 or more employees. Can even be used in cases where you have a reduction in hours worked or a death, divorce, or other life event occurs in your family. If you elect to continue health insurance coverage, you may be required to pay the entire premium for coverage up to 102% of the cost to the plan. Coverage is typically only good for 18 months, but in some cases, you can continue on the plan for 36 months. (p. 9-15).

codicil An amendment to a person's **will**; placed at the end of the written document. (p. 10-32).

coinsurance The sharing of costs between the insured individual and the health insurance company. (p. 9-12).

collateral The item of value that can be sold in the event that loan payments are not made by the borrower. (pp. 5-19, 6-5).

collateralized installment personal loan A loan in which the borrower (1) receives the full amount of the loan up front in a single lump sum and (2) makes equal payments over time to pay back the loan. (p. 6-12).

collectibles Assets that include jewelry, art, stamps, coins, collectible cards, teddy bears, vintage games, antiques, and other "hard assets." (p. 8-74).

collector An individual who specializes in accumulating items for personal pleasure. (p. 8-74).

college savings plans Specific types of accounts set up by states that allow individuals to set money aside for a designated beneficiary's higher education expenses. (p. 7-45).

collision insurance Coverage that pays for the damage to your vehicle caused by contact with another vehicle or object. (p. 9-39).

commercial real estate Land and buildings used by businesses and other income-producing activities (e.g., office buildings, hotels, apartment buildings, warehouses, malls, factories). (p. 8-67).

commission Payment based on the sale of a product or service. (pp. 3-11, 10-47).

commission-based financial advisor A financial advisor who receives some or all of his or her compensation from commissions generated when a client buys or sells a financial product. (p. 8-87).

community property Property obtained by a married couple living in Arizona, California, Idaho, Louisiana, Nevada, New Mexico, Texas, Washington, and Wisconsin (the U.S. Territories of Guam and Puerto Rico are also community property jurisdictions). (p. 10-22).

complex needs analyses Requires calculating present values of future cash flows and adding together all current debts, bills, and liabilities. (p. 9-32).

compound growth Investment gains earned in the first time period are put to work in the second time period to earn additional investment returns. (p. 2-4).

compounding interest When the interest earned begins to earn additional interest. (p. 7-35).

comprehensive insurance Optional coverage that helps pay for damage to your vehicle caused by a nonaccident event, such as hail storms, broken windshields, and vandalism. (p. 9-40).

confirmatory bias Ignoring evidence that investment success is based on pure chance, which leads to overconfidence in future decisions. (p. 1-36).

conflict of interest When a financial professional benefits financially to an extent that exceeds the value provided to the client; exists any time an advisor makes money based on a recommendation that is not in the best interest of his or her client. (p. 10-48).

consumer debt-to-income ratio Indicates what percentage of your income that you are using to pay debt payments. (p. 2-41).

consumer-driven plan A type of health insurance coverage designed to reduce yearly premiums by providing an incentive to the insured to pay more upfront medical expense out of pocket. (p. 9-15).

Consumer Price Index (CPI) Measures the change in the level of consumer goods and services prices over time. (pp. 7-37, 8-58).

contingent beneficiaries Individuals named by the policy owner who receive the death benefit if the primary beneficiary dies before the policy owner. (p. 9-28).

contract A legally enforceable agreement between two or more parties. (p. 10-29).

convertibility provision Allows you to convert to a cash-value life insurance policy in the future without having to provide proof of insurability. (p. 9-29).

copay A flat fee that the insured individual must pay to receive any healthcare service. (p. 9-12).

copayment A flat fee that the insured individual must pay to receive any healthcare service; also known as a **copay**. (pp. 9-6, 9-12).

corporate bonds Bonds issued by companies that generally have a higher coupon rate and a longer maturity date than other bonds. Generally considered to be riskier investments than government bonds because the government can print additional money or increase taxes to repay its debts. (p. 8-21).

corporation A legal business structure that is separate from the owners of the business. (p. 3-22).

co-signer An individual, in addition to the borrower, who will be held responsible for repayment of the debt. (p. 5-45).

cost of living adjustment (COLA) An insurance policy that increases your disability benefits over time based on the Consumer Price Index. (p. 9-25).

country fund A mutual or exchange-traded fund that owns investments in a specific country. (p. 8-48).

coupon payment The amount of interest a bond issuer will pay the bondholder. Coupon payments generally occur twice per year, but they may be more or less frequent. (p. 8-20).

coupon rate The contractual interest rate a bond issuer has agreed to pay the bondholder. Coupon rates can be fixed or variable over the life of the loan. (p. 8-20).

creator An individual involved in transforming her or his human capital into tangible or creative work. (p. 8-74).

credit bureau A company that maintains housing and credit files on consumers. In the United States, Equifax, Experian, and TransUnion are the three primary firms that gather information that they then use to develop a credit report about you. (p. 5-27).

credit card A loan that can be used at the borrower's discretion and convenience and has flexible repayment options; allows the cardholder to make purchases with a **cash advance** from the credit-card company. (p. 5-41).

Credit Card Accountability, Responsibility, and Disclosure Act of 2009 (CARD Act) Requires credit card lenders to inform borrowers on their monthly statement how much they should pay each month to have their credit card paid in full within 3 years. (p. 5-43).

credit counseling agency Provides individual assistance in negotiating with creditors and simplifying payments to creditors. (p. 10-46).

credit freeze Allows your credit reports to be sealed so that no new accounts can be opened unless you unfreeze the account using a personal identification number (PIN). (p. 7-53).

credit limit The maximum amount that can be borrowed using a credit card. (p. 5-34).

credit line See **line of credit**. (p. 5-37).

creditor A firm or individual from whom someone has borrowed money. (p. 5-28).

credit report A summarized accounting of your credit history used by merchants, lenders, rental agencies, employers, businesses, and governmental organizations as a

tool to determine who is, and who is not, a good credit risk. (p. 5-27).

credit risk A person who has a history of not repaying loans and other financial obligations in a timely manner. (p. 5-33).

credit score A tally that summarizes a person's credit risk. (pp. 5-33, 8-71).

credit usage ratio The total amount of revolving loan debt divided by the total credit available to a consumer. (p. 5-38).

cryptocurrency A hybrid currency used in online transactions that acts like cash but works like a person-to-person transfer outside the traditional banking system. (p. 5-14).

CSS/Financial Aid Profile Similar to the **Free Application for Federal Student Aid (FAFSA)**, a form that students complete to apply for tuition and other school expenses from private colleges and universities. (p. 6-17).

current ratio The proportion of current assets to current liabilities. (p. 2-34).

custodial account Assets can be given, transferred, or owned by a minor using the **Uniform Gifts to Minors Act (UGMA)** or **Uniform Transfers to Minors Act (UTMA)** custodial account, depending on individual state laws. UGMAs are used for bank accounts, investments, and insurance policies; UTMAs can be used to hold any type of property, including real estate. (p. 7-42).

custodial IRA accounts Either a Roth or a traditional IRA that allows a minor to accumulate assets based on earnings in a tax-deferred account. (p. 7-43).

daily tasks The immediate actions needed to reach longer-term goals. (p. 1-24).

dealer An individual who creates markets for tangible assets; a business owner who stands ready to buy or sell an asset by creating a market for them. (p. 8-75).

debit card An electronic version of a check. (p. 5-5).

debt ratio A ratio that shows your proportion of total debts to total assets. (p. 2-34).

debt repayment plan (spending plan) The process of paying back debt, usually with the help of a credit counseling agency. (p. 10-46).

decision matrix Often used to classify risks and develop appropriate strategies to best manage those risks. (p. 9-3).

dedicated savings account A popular variation of a traditional CD. (p. 7-22).

deductible The amount that an insured individual must pay before the insurance company will contribute any funds to a claim. (pp. 9-6, 9-12).

deductions Specific expenses allowed by Congress that can be used to offset gross income, resulting in an adjusted gross income. (p. 4-20).

default risk The risk that a company or government may not be able to repay the bond. (p. 8-23).

deficit When expenses exceed income. (pp. 2-40, 3-4).

defined benefit plan (more commonly known as a **pension plan**) Provides a retiree with a guaranteed payment from his or her employer for the remainder of the retiree's life. (p. 10-3).

defined contribution plan A retirement account funded primarily by the employee; defines how much your employer will deposit into your retirement account. (p. 10-3).

deflation When general prices decline. (p. 8-58).

deposit advance A short-term loan that is automatically repaid with the next qualifying electronic deposit. (p. 6-12).

depreciate A term used to describe the decline in value of a use asset. (p. 6-25).

depreciating assets Assets that decrease in value over time. (p. 2-31).

developed international stock markets Those markets where there is a high level of industrialization and high per-person GDP. (p. 8-47).

direct consolidation loans Federal student loans that allow students to consolidate all of their federal student loans into one easy-to-manage loan. (p. 6-19).

direct deposit A way for an employer to transfer your earnings directly to your bank or credit union account. (p. 5-5).

Direct PLUS loans Federal student loans available to graduate and professional students. Direct PLUS loans are also available to parents of undergraduate students to help pay for education expenses in excess of the capped amounts available through the other federal student loan programs. Interest on the loan is added to the loan balance, or students can pay the interest only, until they are no longer attending school and payments begin. Students do not need to show financial need. (p. 6-19).

direct rollover A distribution from a retirement plan where the employer makes the payment directly to an IRA. (p. 10-17).

direct stock plan An investment that allows an investor to purchase shares in firms with little or no transaction costs. (p. 8-7).

Direct subsidized loans Federal student loans made to undergraduate students who demonstrate a financial need. As long as the student is enrolled in school for more than half-time, interest on these loans is paid by the federal government, making these loans the best value if you have to borrow. (p. 6-18).

Direct unsubsidized loans Federal student loans made to undergraduate, graduate, and professional students. Interest on these loans is added to the loan balance until payments begin—which is usually 6 months after graduation. The annual amount a student can borrow is capped. Students do not need to show a financial need. (p. 6-19).

disability According to the stringent definition used by the Social Security Administration, disability includes the following three requirements: (1) you cannot do the work you did before an accident or illness, (2) you cannot readjust your skills because of your medical condition, and (3) disability has or is expected to last for at least one year or until death. (p. 9-21).

disability premium waiver Ensures that your policy premiums will be paid if you become disabled. (p. 9-29).

disclaim To not accept a bequest. (p. 10-31).

discount brokers Online brokerage firms; used by investors who do not need or want advice. (p. 8-10).

discounted dividend valuation model A calculation to determine if a stock is fairly priced: Stock Value = Dividend × (1 + Dividend Growth Rate)/(Your Required Rate of Return − Dividend Growth Rate). (p. 8-12).

discounting Process of determining the present value from the amount to be paid or received in the future. (p. 2-12).

discount rate Rate of return you can earn on your savings. (p. 2-20).

diversification Spreading your investments across different types of assets as a way to manage financial risk. (pp. 8-18, 8-29).

dividend An investor's share of the profits that is distributed directly to the shareholder. (pp. 3-28, 8-6).

dividend reinvestment plan (DRIP) Allows an investor to put the power of compound interest to work by purchasing more shares of stock every time a dividend is paid. (p. 8-7).

dividend yield A dividend expressed as a percentage of a current share price. (p. 8-6).

do-not-resuscitate (DNR) declaration A person who is terminally ill but still able to competently make their own medical decisions may draft a form that instructs doctors, hospitals, nursing care facilities, and other health professionals to withhold CPR and other measures that can facilitate breathing if a situation arises when these procedures are recommended. (p. 10-40).

durable power of attorney (POA) A legal document that names another person to make financial decisions for you on a pre-set time period, regardless of any disability or incapacitation. (p. 10-40).

earned income Money that you receive from work (payment for effort) whether in the form of salaries, wages, commissions, or bonuses, or for operating your own business. (pp. 3-25, 7-30, 10-16).

Earned Income Tax Credit A refundable credit designed to reward work and boost the earnings of low-income workers. (pp. 3-42, 4-35).

earnings Compensation received for services performed for an employer; the amount generated from investments. (pp. 3-11, 7-28).

earnings history A record of how much taxable income has been earned for each year of an individual's working life. (p. 3-42).

earnings per share (EPS) Measures the amount of a firm's profit per each outstanding share of common stock. (p. 8-6).

economic life span How wealth rises and diminishes over time. (p. 3-30).

educational value The point where returns through job placements, income, and human capital outweigh the costs of attendance. (p. 1-13).

EE bonds U.S. savings bonds that can be purchased for as little as $25 and have a fixed interest rate payable for up to 30 years. (p. 7-36).

effective interest rate The amount of interest actually earned on an investment. (p. 8-24).

effective tax rate Measures the average tax an individual pays on his or her entire income. (p. 4-29).

electronic transactions Payments made at the time of a purchase and transfers of money from one account to another. (p. 5-12).

elimination period The waiting phase between the time an insured individual qualifies for benefits and when the insurance carrier begins providing benefits. (pp. 9-23, 9-54).

emancipated An individual no longer considered a minor. (p. 7-43).

emergency fund The best way to handle unforeseen circumstances is to have money set aside in a separate account; financial planners often recommend that emergency funds be kept safe, secure, and accessible, like in a savings account. (pp. 5-19, 7-7, 7-12).

emergency fund ratio A ratio that compares household living expenses to monetary assets. (pp. 2-42, 7-13).

emerging international stock markets Those markets where the economy is not as industrialized and per-person GDP is low. (p. 8-47).

endorsement Your signature. (p. 5-4).

endorsements Specific insurance policy provisions. (p. 9-29).

equity The value of the asset less any debt associated with that asset. (pp. 2-32, 8-3, 8-68).

estate Someone's property, which can include personal, real, and intangible assets; assets less liabilities and other expenses. (p. 10-25).

estate taxes Taxes assessed on the value of a decedent's estate at death. (p. 10-32).

estimate Rough calculation of a value, quantity, or number. (p. 1-14).

estimated tax payments For tax purposes, a self-employed individual must pay regular federal, state, and local income taxes directly through quarterly payments throughout the year based on the income earned. Estimated tax payments are due 15 days after the end of the calendar quarter (3-month period). (p. 4-43).

eviction When a landlord removes a tenant (renter) from a property for breaking a clause in the lease, such as not paying rent on time. (p. 6-37).

excess federal income tax withholdings When you complete your tax return, you may find that you qualify for a tax refund because you had too much in taxes taken out of your paychecks during the year. (p. 4-36).

excess liability coverage (also called **umbrella policy**) Additional liability insurance that goes beyond limits set in a homeowner's, renter's, or personal automobile policy. (p. 9-49).

exchange-traded fund (ETF) An investment that combines the features of a mutual fund and a stock; most ETFs are index funds or passively managed funds. (p. 8-40).

excluded Income excluded from gross income; not calculated in terms of the tax base. (p. 4-19).

exclusive provider organization (EPO) A type of managed care plan; typically only includes the use of doctors, specialists, clinics, and hospitals in the plan's network. Tends to be restrictive. (p. 9-15).

executor The **personal representative** (e.g., relative or attorney) or institution (e.g., trust company) tasked with the responsibility of carrying out a will's directions and disposing of the deceased's property. (p. 10-32).

expense ratio A measure of the total management fees and expenses charged by a mutual fund on an annual basis. The ratio expresses the percentage of the mutual fund assets used to pay these recurring expenses. (p. 8-33).

expenses Everything you spend money on. (pp. 2-40, 8-5).

face value (or par value) The amount of money a bond issuer (the borrowing corporation or government) will pay to the bondholder (the investor lending the money) on the maturity date. Typical par values are $1,000 or $100. (p. 8-20).

face value The amount from a life insurance policy that will be paid in the event of death. (p. 9-29).

Fair Credit Reporting Act (FCRA) Requires Equifax, Experian, and TransUnion to provide you with a free copy of your report once every 12 months. (p. 5-30).

Fair Labor Standards Act Passed in 1938, legislation designed to protect those paid by the hour, such as imposing minimum wage requirements on employers. (p. 3-12).

fair market value The price someone would realistically pay to buy an asset. (p. 2-31).

familiarity bias The tendency to prefer home country investments and markets. (p. 8-46).

FDIC insurance Protects depositors in the institution up to at least $250,000 per account ownership category in case the bank or credit union fails. (p. 5-5).

federal deficit The amount by which annual federal government expenditures exceed annual federal receipts, which are made up primarily of tax collections. (p. 4-8).

Federal Deposit Insurance Corporation (FDIC) A federal agency that provides bank depositors with insurance in the event a bank goes out of business. The **National Credit Union Insurance Fund (NCUSIF)** provides similar coverage to those who hold deposits at a credit union. (p. 7-22).

federal direct loans The primary form of student financial aid. There are four types of federal direct loans: **direct subsidized loans, direct unsubsidized loans, direct PLUS loans,** and **direct consolidation loans**. (p. 6-18).

federal government bonds Fixed-income securities issued by the U.S. government to help fund ongoing government expenses. (p. 8-21).

Federal Insurance Contributions Act (FICA) A tax used exclusively to pay for two government programs: Social Security (FICA Old age, survivor, and disability insurance [OSADI]) and Medicare (FICA health insurance). (p. 4-4).

Federal Pell Grant Program A popular federal grant that provides financial aid for low-income undergraduate and certain post baccalaureate students. (p. 3-42).

federal surplus When tax revenue exceeds annual expenditures. (p. 4-8).

fee The amount typically paid to a financial professional *from the client*. (p. 10-47).

fee-for-service plan The most flexible, and costly, type of health insurance coverage available; allows the insured to use the services of different hospitals, clinics, and doctors without prior permission. (p. 9-14).

feelings of control The amount of control you feel you have when making financial decisions. (p. 1-4).

fee-only financial advisor Charges clients directly for services and receives no commissions based on what or how much a client buys. (p. 8-87).

fees Charges associated with credit cards, such as the **account set-up fee** and the **annual fee**. (p. 5-43).

fee simple A method of property titling in which one person owns property. (p. 10-22).

FHA loans Insured (for the lender) by the government so that lenders are more willing to make loans to borrowers that (1) have less money available for closing costs and down payments and (2) may also have slightly lower credit scores than are necessary to qualify for conventional mortgages. (p. 6-45).

FICO® score The most widely used credit score, created by Fair Isaac Corporation. Each of the major credit bureaus uses a FICO score, although each may use a different title (for example, Equifax calls theirs a **BEACON® Score**). (p. 5-34).

fiduciary Required to put the client's best interest first; all registered investment advisers (RIAs), fee-only financial planners, and CFP® professionals must act as fiduciaries. (p. 8-89).

fiduciary standard of advice Requires financial professionals to act in the best interest of the client at all times and fully disclose any and all conflicts of interest. (p. 10-48).

filing status Personal information on your tax return that is determined by your marital status and the presence of dependents. (p. 4-15).

finance charge The total amount of fees and interest charged by a lender for a loan. (pp. 5-19, 5-23).

financial advisor A professional engaged in the business of providing financial and investment advice for a fee. Sometimes this fee is paid as a commission; at other times, the fee is a direct payment from the client to the advisor. Financial advisors usually help their clients deal with one or just a few issues, such as insurance planning, investment management, or education planning; the advisor may also be called an *investment advisor, investment consultant, insurance agent, insurance broker, registered representative,* or *stockbroker*. (pp. 8-86, 10-44).

financial capacity The ability to keep moving forward toward goal achievement even if you face a few financial challenges or emergencies along the way. (p. 8-55).

financial counselor Helps people resolve past financial difficulties, as well as helps those with fewer assets and lower incomes establish a plan for the future. (p. 10-44).

financial knowledge Possessing awareness of important information needed to understand and apply personal finance concepts. (p. 1-3).

financial literacy How well you understand and use personal finance information. (p. 1-1).

financial objectives Things that need to happen along the way toward reaching a financial goal. (p. 1-24).

financial planner Can act as your "financial quarterback" by providing help and guidance on all aspects of your financial situation. Generally results in a long-term client–planner relationship that usually focuses on helping clients achieve future goals. (p. 10-44).

financial planning A future-oriented process that is designed to help an individual or family achieve financial goals. (p. 10-46).

financial ratio A formula that tells you how well you are progressing financially by comparing your current situation to a preestablished benchmark. (pp. 2-34, 2-41).

financial risk Includes the possibility of gains and losses, as well as threats associated with losing purchasing power, default, and other negative events. (p. 8-52).

financial risk tolerance Your willingness to engage in a risky behavior that entails the possibility of a financial loss. (pp. 1-4, 1-18, 7-3).

financial roadmap A course of action that will help you outline exactly how to apply your financial knowledge to achieve your life vision. (p. 1-7).

financial score A score that provides insight into your current financial position. Your score is shaped by your basic knowledge of financial literacy topics, experience with these topics, feelings of control, and your willingness to take financial risk. (p. 2-48).

financial well-being Your confidence and peace of mind regarding your financial situation. (p. 1-4).

fixed installment loans Lending contracts wherein the lender agrees to loan the borrower a certain amount of money at a set interest rate for a set time period. In turn, the borrower agrees to repay the money through fixed monthly payments that will not change during the life of the loan. (p. 5-23).

flat tax Imposing the same tax rate on all taxpayers subject to the tax. (p. 4-7).

flexible spending account (FSA) An employer-provided, tax-deferred account that allows an employee to set money aside for approved medical expenses on a pretax basis; however, any unspent employee contributions are forfeited at the end of the plan period. (pp. 9-17, 9-18).

FOR AGI deductions Deductions used in the calculation of adjusted gross income (AGI). (p. 4-20).

foreclosure The process of a mortgage lender taking possession of a house and any equity in the house because a borrower did not meet payment obligations under the loan agreement. (pp. 5-27, 6-42, 8-71).

formal networks Interpersonal relationships that connect you with people in professional, recreational, leisure, and social communities. (p. 1-13).

fraud Occurs whenever someone attempts to deceive you with a promise of goods, services, money, or other benefits that really do not exist, were never intended to be provided, or were misrepresented. (pp. 5-30, 7-48).

fraud protection Assistance in case a prepaid debit or credit card is lost or stolen. (p. 5-14).

Free Application for Federal Student Aid (FAFSA) Determines the type of financial aid that someone may receive; some private colleges and universities use the **CSS/Financial Aid Profile®** application instead of or in addition to the FAFSA form. (p. 6-17).

fringe benefits Employer-provided assistance, such as health insurance, retirement savings, and sick and vacation pay. (p. 3-41).

FROM AGI deductions IRS-approved expenses that reduce adjusted gross income when calculating taxable income; a taxpayer may use either a standard or itemized deduction amount when filing taxes. (p. 4-20).

full-service brokerage firms (or *broker–dealers*) Investment firms that connect investors with a professional who provides trading advice and other investment services. (p. 8-62).

full-service brokers Professionals who provide trading advice and other services to investors. (p. 8-10).

future-oriented A psychological time perspective based on a calculation of the consequences of actions in terms of a future payoff. (p. 1-27).

future value (FV) The amount to be earned at the end of a specific period of time. (p. 2-12).

future value of a lump sum An estimate of the value of a single dollar amount at some future date given a known interest rate and number of periods. (p. 2-12).

future value of an annuity The sum of all the payments (receipts) plus the accumulated compound interest on the payments. (p. 2-13).

gap coverage Insures you for the "gap" between what you owe on your car and what the car is worth. (p. 9-41).

garnish wages A court order to have an employer pay an employee's wages directly to a creditor. (p. 5-20).

general partnership Form of legal business structure operated by two or more individuals where decision making is typically made by the majority. (p. 3-22).

general power of attorney (POA) Transfers broad powers to your agent so that he or

she could theoretically make all nonmedical decisions for you. (p. 10-40).

gift The irrevocable and voluntary transfer of property to another living person while alive. (pp. 10-25, 10-30).

glide path The rate and pattern at which an investor's asset allocation shifts from more to less risky in a target date fund. The hope is to reduce return volatility as an investor grows older. (p. 8-35).

global fund A type of professionally managed mutual fund that purchases shares in foreign and U.S. companies. (p. 8-48).

goal time horizon The time between creating a goal and actually achieving the goal. (p. 1-26).

good debt Investments made to increase your human capital. (p. 2-33).

good faith estimate (GFE) A document that details the following information: loan type; loan amount; interest rate; expected monthly principal and interest payment; **closing costs**, which include all of the associated loan and purchase fees associated with buying a house, such as **appraisal fees**, **title insurance**, governmental taxes, and some prepaid taxes and insurance. If you are borrowing money to purchase the house, your closing costs will also include fees charged by the lender and mortgage broker. (pp. 6-44, 6-45).

government transfers Government benefits such as unemployment benefits and health care. (p. 3-39).

grace period The amount of time allowed to pay a bill without incurring interest or penalties. (p. 6-19).

Graduated Repayment Plan A student loan repayment plan in which loan payments increase over time. (p. 6-20).

grantor What you are called when you establish a trust. (p. 10-24).

gross domestic product (GDP) A measure of how an economy is growing; measured by adding up how much a country produces in goods and services in a year. (pp. 1-5, 8-46).

gross income Total income before taxes and other deductions. (pp. 2-40, 4-19).

gross pay Total amount of earnings before taxes and other deductions are considered. (p. 4-3).

gross sale The sum of all sales transactions made by a business over a given period of time. (p. 8-5).

growth and income stocks A type of investment that provides a combination of stock appreciation and dividends. (p. 8-6).

growth-oriented investors Investors who seek stocks whose share price is quickly increasing; these stocks tend to be more expensively priced. (p. 8-31).

growth stocks Stocks that focus on stock price appreciation. (p. 8-6).

guaranteed renewability provision (or **non-cancellable clause**) Insurance policy that cannot be canceled by the insurance company, except for nonpayment of premiums. You also have the right to renew the policy in the future with the same benefits. (pp. 9-25, 9-30).

guarantor Someone, like a parent or relative, who agrees to pay your rent in case you do not or cannot make rental payments. (p. 6-35).

guardian for minor children A person named in a will or other legal document who will assume guardianship for a person's child(ren) upon a named event occurring. (p. 10-33).

hard assets Something you can hold, buy, and sell. (p. 8-74).

hard inquiries Credit inquiries, such as loan applications. (p. 5-37).

hazard A situation or condition that makes the probability of a peril occurring more likely. (p. 9-45).

hazard insurance An insurance policy that reimburses the homeowner if his or her home and belongings are destroyed or stolen. (p. 6-43).

healthcare proxy (also known as a **power of attorney for health care,** a *surrogate*, or an *agent*) A legal document that ensures your wishes are known if you become injured or ill, but are not in a life-ending condition. (p. 10-39).

health insurance A financial tool that allows individuals to manage the unpredictable and potentially excessive costs associated with health care; serves as a way to transfer some of your healthcare risks to an insurance company. (p. 9-10).

health-insurance marketplace plans Health insurance that is purchased through a government website. (p. 9-16).

Health Insurance (HI) tax The formal name for the Medicare tax. (p. 4-42).

health maintenance organization (HMO) A popular form of **managed care**; provides medical care through a network of physicians and hospitals located in a specified geographic area. Rather than charge a large upfront deductible and ongoing coinsurance, services are charged using relatively small copayments per visit. The intent of an HMO is to coordinate healthcare services in a way that prevents rather than treats illness. (p. 9-14).

health savings account (HSA) An employer-provided, tax-deferred account that allows an employee to use contributions for approved medical expenses on a pretax basis; an HSA is associated with the use of a high-deductible health plan. (p. 9-15).

hedge fund An investment that pools money from wealthy investors and invests in securities or other types of investments with the goal of obtaining positive returns; tends to be less well-regulated than other managed investment products and services, like mutual funds. Can only solicit investments from accredited investors. (pp. 8-83, 8-84).

heuristics A decision-making shortcut for processing a lot of information. (p. 1-34).

high deductible health plan (HDHP) The most popular consumer-driven health plan. (p. 9-15).

hobbyist An individual involved with buying and selling items in which they are interested, without consideration of future profit. (p. 8-74).

holographic will A handwritten will determined to be in effect even if it has not been witnessed. (p. 10-33).

home care A health or long-term care service that provides skilled nursing care in the home rather than in a medical facility. (p. 9-54).

homeowners' association An organization managed by a group of homeowners with the intent of maintaining property owned by the homeowners. (p. 6-49).

homeowner's coverage policy (HO policy) Covers either named perils or all risks. (p. 9-47).

housing equity The difference between what a house could sell for and the amount still owed on the mortgage. (p. 6-47).

housing payments-to-income ratio The Federal Housing Authority (FHA) recommends that homeowners not spend more than 31% of their monthly income on housing expenses; also known as the **front-end mortgage qualification ratio**. (p. 6-43).

human capital Your ability and willingness to work, learn, earn, and make wise decisions about how to save and invest money (pp. 1-9, 9-3).

human life value approach A time value of money calculation to estimate insurance needs. The formula is as follows:

$$PVA = \frac{PMT}{i}\left[1 - \frac{1}{(1+i)^n}\right]$$

where PVA is present value of an annuity, PMT is your current income, i is the current interest rate you can earn on investments, and n is the estimate number of years your beneficiary will need income. (p. 9-33).

hyperbolic discounting The perception that the value of future benefits is lower than that of an alternative available right now. (p. 1-33).

I bonds U.S. savings bonds that can be purchased for $25 or for $50 if purchased directly from an income tax refund; have a

variable interest rate that adjusts semiannually. (p. 7-36).

identity theft A crime in which someone wrongfully obtains and uses your personal data, such as your name and Social Security number, in some way that involves fraud or deception for his or her economic gain. (pp. 5-30, 7-51).

income A broad term used to describe all sources of money obtained by individuals and households that can be spent or saved. (pp. 2-38, 3-11).

income and expense statement A tool to track the actual amount of money earned and spent. (p. 2-38).

income multiplier estimation A way to determine the amount of life insurance someone needs; typically determined by multiplying someone's income by 10. (p. 9-32).

income stock A type of investment that pays out a large portion of earnings in the form of dividends. (p. 8-6).

indemnity Insurance provision that states that individuals (the policy owners) can only be compensated up to the value of their loss. (p. 9-7).

independent contractors Individuals who enter into agreements with other businesses and individuals to perform specific tasks or functions but are not considered employees. (p. 3-18).

index-based ETF Highly diversified investments similar to an index mutual fund; attempts to track the performance of a market index like the S&P 500. (p. 8-40).

index funds (also known as **passively managed mutual funds**) Investments that seek to mirror the returns of a specific index. (p. 8-31).

Individual Retirement Accounts (IRAs) (sometimes referred to as **Individual Retirement Arrangements (IRAs)**) IRS-approved accounts that allow someone with earned income to earn money for retirement on a tax-deferred basis. (p. 10-12).

inflation risk (or **purchasing power risk**) The danger that rising prices in the economy will erode purchasing power. (pp. 7-3, 8-23).

informal networks The interpersonal relationships you form with your family and close friends. (p. 1-12).

inheritance Money or assets received, tax-free at the federal level, at the death of another person. (p. 10-25).

initial public offering (IPO) A process that underwriters use to raise money for a business through the selling of stock. (p. 8-3).

installment credit A type of loan in which a borrower makes a series of payments, typically equal in amount, to the lender over a predetermined period of time. (p. 5-35).

installment loans A loan whereby the borrower receives the full amount of the loan up front in a single lump sum. These loans are designed to be repaid over a fixed period of time through regular payments and consist of two general types: **fixed installment loans** and **variable installment loans**. (pp. 5-23, 6-12).

insurable interest A requirement by insurance companies, prior to issuing a policy, that someone who applies for a life insurance policy would suffer a financial loss if the insured died. (p. 9-28).

insurance The primary way people transfer risk of a loss to another party, like an insurance company. To take on your risk, the insurance company will likely charge you the following three amounts: **premium** (the cost of the insurance); **deductible** (the amount that you must pay on a claim before insurance comes into play); and **copayment** (a cost-sharing amount with the insurance company) . (p. 9-6).

insurance rider An agreement added to a policy by the insurance company to expand or limit coverage. (p. 9-25).

insured The person who must die for a life insurance policy to pay off (most often, the policy owner is the insured, but not always). (p. 9-28).

interest The amount paid to the lender for the use of his or her money. How much it costs to borrow is determined by the interest rate charged on the loan. (pp. 2-3, 5-19).

interest rate risk The chance that general interest rates will increase, which will reduce the value of most assets. (p. 7-3).

internal finance The combination of your financial knowledge, financial risk tolerance, and feelings of control. (p. 1-3).

Internal Revenue Service (IRS) A government agency within the U.S. Department of the Treasury charged with collecting taxes and enforcing tax laws passed by Congress. (p. 4-10).

international fund A type of investment that owns shares of companies traded outside the United States. (p. 8-48).

intestate To die without a will. (p. 10-30).

introductory APR A special rate only offered during an initial time period after opening an account. (p. 5-43).

introductory clause Lists the city and state of residency, and a note about this being the last will and testament of the deceased. (p. 10-33).

investment payback period The time required to earn back your investment, calculated as: Payback Period = Total Costs ÷ Increase in Annual Income. (p. 1-14).

investment portfolio Individual stocks that collectively represent the total investment assets of an individual or entity. (p. 8-29).

investment pyramid An investment tool that illustrates how a portfolio can be developed. (p. 7-7).

investment risk Uncertainty or volatility associated with investing. (p. 8-52).

investments Assets that you purchase to reach long-term goals. (p. 7-6).

investor Someone who allocates resources to assets in the hope of making money. (pp. 3-28, 8-5, 8-75).

IRA rollover The act of moving money from a retirement plan to an individual retirement account after employment termination. (p. 10-17).

irrevocable living trust A legal entity that cannot be changed once established; designed to hold title to assets. (p. 10-25).

itemized deductions Specific expenditures that taxpayers can claim instead of the standard deduction. (p. 4-21).

joint tenancy with right of survivorship (JTWROS) A title designation whereby you own the property equally with another person, and each of you has rights of survivorship. (pp. 10-22, 10-29).

junk bond A bond with a rating lower than BBB, which is an indication that the firm or government may have trouble making interest payments in the future; typically sell for less than higher rated bonds. (p. 8-25).

kiddie tax A tax imposed by Congress on net unearned income of dependent children in a household. (pp. 4-27, 7-44).

landlord The person or company that owns the property you hope to rent. (p. 6-35).

lease A legal document that outlines the terms of a rental agreement. (pp. 6-29, 6-36).

legal advisor Usually a licensed attorney who is empowered to draft legal documents. (p. 10-44).

lenders Banks, credit unions, car dealerships, and others who lend money for purchases. (p. 2-33).

letter of last instruction A non-legally binding letter to your survivors that tells them about your burial wishes and any memorials you would like. (p. 10-33).

level term Life insurance purchased for periods ranging from 5 to 30 or more years. (p. 9-29).

liabilities Debts and other legal obligations that are owed to others. (pp. 2-29, 9-36).

liability coverage Intended to pay for medical costs, funeral expenses, lost wages, punitive damages, car rentals, repairs, and compensation for pain and suffering for people in the other car involved in an accident. (p. 9-39).

lien The legal right of a lender to sell the collateral if the borrower does not repay the loan. (p. 5-20).

life insurance Provides a tax-free, lump-sum insurance benefit that can be used to pay final expenses, burial costs, debts, and other expenses. (p. 9-28).

Lifetime Learning Credit Available to taxpayers who do not qualify for the American Opportunity Credit. (p. 4-35).

limited liability company (LLC) A legal business structure that shields the personal assets of the owner(s) from the liabilities of the business. (p. 3-22).

limited liability partnership A legal business structure designed for professionals working in a partnership. Partners will not be held liable for the negligent actions (and resulting liabilities) of other partners, but they will still be liable for the general obligations of the business. (p. 3-22).

limited partnership A partnership in which there is a general partner who manages the business and one or more limited partners that simply invest money into to the partnership and are not involved in the day-to-day management. (p. 3-22).

limited power of attorney (POA) Allows a person named by you in a legal document to act only in specific ways for a limited amount of time. (p. 10-40).

limit order A way to buy securities in a brokerage account where an asset will be bought or sold only at a specific price or better. (p. 8-63).

line of credit A type of loan that the borrower can access at any time, make payments on the loan to decrease or pay off the balance, and borrow the money again without having to reapply for a loan from the lender. (p. 5-37).

liquidity How quickly an asset can be converted to cash without penalties or a significant reduction in value. (pp. 2-31, 5-4, 7-7).

liquidity risk How quickly you can convert an asset to cash without price concession or loss. (pp. 7-3, 8-52).

living trust A trust created while the grantor is still alive. (p. 10-25).

living will (or **advanced directive**) A legal document that is used to direct a physician or hospital about the types of medical treatment someone wants or does not want in the case the person becomes incapacitated. (p. 10-37).

load A commission. (p. 10-47).

loan fees Additional money paid to a lender for things such as processing the loan or loan payments, late payments, and any other fees the lender may require a borrower to pay. (p. 5-19).

loan origination fees An expense paid to a lender for providing a loan. (p. 6-45).

loan points A fee paid to reduce a mortgage interest rate; if borrowers want a lower interest rate on their mortgage, they sometimes have the option of paying a large upfront fee in exchange for a lower interest rate; equal to 1% of the loan amount. (p. 6-45).

loan term The length of time a borrower has to repay the loan. (p. 5-24).

longevity risk The risk associated with outliving retirement savings. (p. 10-7).

long-term capital gains Produced by selling assets (such as real estate or stock) that you have owned for more than one year for a profit. (pp. 3-36, 4-28).

long-term care Nursing care based on an individual being unable to perform at least two ADLs on a regular basis. (p. 9-53).

long-term care insurance A way to transfer the potential financial risk associated with long-term care needs. (p. 9-53).

long-term disability policy A form of insurance that pays benefits to someone who has been diagnosed as disabled and cannot work for 6 to 12 months; long-term disability payments typically last through a person's disability or until age 65. (p. 9-23).

long-term gain Profit associated with selling an asset for more than the purchase price, after owning the asset for more than one year. (p. 3-36).

long-term goal Something that will take several years to accomplish. (p. 1-24).

long-term liabilities Debts that are intentionally structured to be paid off over time periods that are greater than one year. (p. 2-31).

loss-averse A general dislike of losses. (p. 1-35).

mainstream financial service providers Banks, credit unions, and other deposit institutions. (p. 5-19).

mainstream financial system Institutions, such as banks and credit unions, that offer lower interest rates, are more heavily regulated by state and federal government agencies, offer what are considered traditional loan products, and rely heavily on each borrower's credit report and credit score when deciding whether to approve a loan. (p. 6-3).

managed care System of health care where patients visit doctors, hospitals, and specialists in a specified monitored network. (p. 9-14).

margin account A type of brokerage account that allows an investor to purchase investments with borrowed money. (p. 8-62).

marginal tax rate The rate of change in tax resulting from a change in income or deduction. (p. 4-26).

marketability A measure of how active and robust a market is for investments and other assets. (p. 8-48).

marketability risk The threat that an investor may not be able to sell an asset quickly and receive cash in a timely manner. (p. 8-53).

market capitalization (market cap) The price of a stock multiplied by the total number of shares in the market place. (p. 8-13).

market index An unmanaged grouping of stocks that has been identified as representative of some aspect of the economy or stock or bond market. (p. 8-31).

market order Instructs a brokerage firm to buy (or sell) at the current market value; the fastest way to transact trades in an account. (p. 8-63).

market timing The belief that you or anyone can consistently determine highs and lows in the market before they occur. More often than not, this results in problematic financial outcomes. (p. 8-41).

marshmallow test An experiment undertaken by Walter Mischel, a Columbia University faculty member, in the 1960s to determine what might make individuals forgo immediate rewards for a larger payoff in the future. (p. 1-27).

maturity date The length of the loan contract for a bond, which could be a few months, years, or several decades into the future. (pp. 7-22, 8-20).

Medicaid State-administered health insurance designed to provide coverage for individuals and families with low incomes and limited financial assets. Eligibility and benefits vary considerably from state to state. (pp. 3-41, 9-11, 9-57).

Medicare A federally run health insurance program available to those who are age 65 or older, those who are younger but have a disability, and those with end-stage renal disease. (pp. 3-41, 4-42, 9-11, 9-56).

minimum essential coverage (MEC) A provision of the Affordable Care Act that requires that health insurance plans offer a comprehensive list of medical services and conditions that health insurance plans must cover. (p. 9-16).

minimum wage The lowest wage employers are allowed by law to pay their hourly employees, currently $7.25 per hour in the United States. (p. 3-12).

minors Those younger than age 18; can own titled assets (such as savings, investments, and real estate) *indirectly* through a **custodial account**. (p. 7-42).

modified-own occupation disability coverage Pays a benefit if you are unable to perform the material and substantial duties of your own occupation and cannot

find another position in which you are suited by education, experience, or training. (p. 9-21).

monetary assets Highly liquid assets that are or could be converted to cash quickly, such as cash, savings and checking accounts. (pp. 2-42, 7-13).

money market savings account (MMSA) Combines the benefits offered by savings and checking accounts, including FDIC and NCUSIF insurance protection up to $250,000 for individuals. (p. 7-22).

money order A prepaid check purchased from a bank, credit union, and convenience and grocery stores. (p. 5-4).

monthly living expenses The sum of household expenses over a one-month period; minimum monthly living expenses are often used in the emergency fund ratio. (p. 7-13).

morale hazard A careless attitude on the part of an insured policyholder. (p. 9-46).

moral hazards Dishonesty, cheating, and filing false insurance claims. (p. 9-46).

mortgage A special type of loan secured by real property. (p. 6-42).

mortgage insurance An insurance policy that protects lenders from nonrepayment of the loan; mortgage insurance is required if the borrower borrows more than 80% of the value of the home. (p. 6-43).

mortgage loan officer An individual who specializes in mortgages and can help you get preapproved for a loan so that when you find the house you want, you know you can afford it. (p. 6-44).

municipal bonds Bonds issued by states and local governments used to develop and maintain infrastructure (roads, buildings, and parks), schools, and police and fire departments. (p. 8-22).

mutual funds Investments that pool individual investors' money for the purpose of hiring a professional investment manager to make investment decisions and providing sufficient investment capital to purchase a large investment portfolio, thereby reducing some investment-related risk. (p. 8-29).

named perils policy A type of homeowner's policy that pays only if the insured has a loss from something specifically listed in the policy (e.g., fire or smoke). (p. 9-47).

National Credit Union Share Insurance Fund (NCUSIF) See **Federal Deposit Insurance Corporation** (**FDIC**). (p. 7-22).

National Flood Insurance Program (NFIP) A federal insurance program managed by the Federal Emergency Management Agency (FEMA) that provides flood insurance to those living in a flood zone. (p. 9-49).

negative effective tax rates Result when refundable tax credits exceed an individual's total tax. (p. 4-32).

net asset value The value of assets less liabilities held in a mutual fund or exchange-traded fund, stated on a per-share basis. (p. 8-41).

net earnings The total amount of money received from self-employment activity less the expenses that are incurred to generate that income. (p. 4-43).

net profit Profit remaining after operating expenses, taxes, etc. are deducted. (p. 8-5).

net worth Assets minus liabilities. (p. 2-29).

no-load mutual fund A type of mutual fund investment that does not charge a sales load when shares are purchased or sold. (p. 8-33).

nominal return The rate of return on an investment without adjusting for inflation. (p. 7-4).

nonrefundable tax credits Tax credits that can reduce an individual's assessed tax to zero but cannot make it negative (where the federal government owes the taxpayer money). (p. 4-33).

non-sufficient funds A banking term describing when the amount held in an account is less than the amount being spent by the account owner; also known as **writing a bad check**. (p. 5-5).

not-for-profit organization (or a non-exempt 501(c)(3) organization) An entity that is not liable for any taxes as it provides necessary community services, such as emergency management, military service, public safety, law enforcement, public interest law services, early child education, public service for individuals with disabilities and the elderly, public health, public education, public library services, or school library or other school-based services. (p. 6-21).

number of periods (N) The amount of compounding periods used in time value of money calculations. (p. 2-12).

objective risk The ranking of risk per actual statistics; can be measured using probabilities. (pp. 3-29, 7-5).

Old-Age, Survivors, and Disability Insurance (OASDI) The actual name of the Social Security tax. (p. 4-42).

open-end credit Preapproved loan between borrower and financial institution that may be used frequently up to a certain credit limit and can be paid back earlier. (p. 5-41).

opportunity cost The loss of a benefit that you would have received by choosing another option. (p. 7-19).

optimism bias Believing that one will rarely, if ever, experience painful losses during one's lifetime. (p. 1-36).

ordinary income Income derived from work, interest, self-employment, retirement plan distributions, rents, royalties, and other sources of earned income. (p. 4-28).

out-of-pocket expenses Expenses for medical care that are not reimbursed by insurance. (p. 9-11).

out-of-pocket maximum A cap on the total amount an insured must pay in a given year within a health insurance policy. (p. 9-13).

overdraft Writing a check for an amount greater than your account balance; also known as **bouncing a check**. (p. 5-5).

overdraft fee A penalty assessed by a bank for insufficient funds in an account. (pp. 5-5, 6-12).

overdraft protection A bank service that allows someone to spend more than their account balance. (p. 5-13).

overextended Unable to make minimum payments in the future. (p. 5-38).

overtime Working more than 40 hours in one week. (p. 3-13).

own occupation A less-strict definition of disability that provides benefits when an insured is unable to perform the material and substantial duties of his or her own occupation (and does not make money doing something else). (p. 9-21).

owner Someone who owns a business interest or shares in a company, who is by law entitled to share in the profits of the company. (p. 8-5).

partial disability rider Allows you to return to work part-time and receive partial benefits if you cannot work on a full-time basis as a result of your disability. (p. 9-26).

par value (or **face value**) The amount of money a bond issuer (the borrowing corporation or government) will pay to the bondholder (the investor lending the money) on the maturity date. Typical par values are $1,000 or $100. (p. 8-20).

passively managed Mutual funds (or **index funds**) that seek to mirror the returns in the stock market rather than beat them. (p. 8-31).

pass-through deduction A tax deduction that allows self-employed individuals to lower taxable income by 20% of qualifying business income. (p. 4-41).

past-oriented A psychological time perspective based on memories, whether good or bad. (p. 1-27).

Patient Protection and Affordable Care Act An act passed by Congress in 2010,

sometimes called the *Affordable Care Act* or *Obamacare*, that attempted to reform the healthcare system by providing more Americans with quality health insurance coverage. (p. 9-11).

pawn shops A place where individuals can buy and sell collectibles and other personal property for cash; pawnshops can help create a market for some collectibles. Also make loans; do not typically rely on an individual's credit report when making a loan decision. Instead, firms operating in the alternative financial system marketplace focus on making loans that are collateralized either with an asset or access to a borrower's bank account. (p. 8-74).

payable on death (POD) An account that includes a designation of one or more beneficiaries who will receive the assets when the account owner dies. (pp. 10-22, 10-29).

pay-as-you-go programs Program whereby current taxes fund the current benefits. (p. 3-44).

pay-as-you-go system Program whereby current taxes fund current retirees; the Social Security program is one example. (p. 10-5).

payday loan A short-term loan designed to be repaid within a few weeks when the borrower receives a paycheck. (p. 6-4).

payroll deduction When an employer takes money automatically from an employee's paycheck and contributes the money directly to a retirement savings plan or other savings account. (p. 3-6).

peer-to-peer (P2P) lending Allows a borrower and a lender to come together via the Internet. (p. 6-13).

peer-to-peer payments (P2P) Apps that allow you to transfer money from your bank to someone else in your personal network. (p. 5-14).

penalty APR The interest rate that applies when borrowers make late payments or exceed their credit limit. (p. 5-43).

pension plan (also known as a **defined benefit plan**) Provides a retiree with a guaranteed payment from his or her employer for the remainder of the retiree's life. (p. 10-3).

P/E ratio A stock valuation tool that is calculated by dividing a stock's price per share (P) by the earnings per share (E). (p. 8-13).

peril Anything that causes you to experience a loss. (p. 9-45).

personal automobile policy (PAP) Insurance that helps pay expenses **(liabilities)** to others in case you cause an accident; some provisions within a PAP can be used to repair your vehicle in case of an accident or other damage. (p. 9-36).

personal line of credit A loan issued by a bank that is accessed by a customer via a debit card or check; interest is only paid on the money borrowed. (p. 6-12).

personal loan A small-dollar debt that can be used to pay bills or make purchases. (p. 6-10).

personal property floater (sometimes called a *rider*) Adds extra insurance coverage for jewelry, art, guns, furs, collectibles, or other high-value property. (p. 9-48).

personal representative The person (e.g., relative or attorney) or institution (e.g., trust company) tasked with the responsibility of carrying out a will's directions and disposing of the deceased's property; also known as the **executor**. (p. 10-32).

pet deposit A separate fee imposed by a rental agreement that is intended to offset damages caused by animals living in the rental property. (p. 6-37).

phishing scheme An unsolicited e-mail asking you to provide personal information (such as your social security number) or confirm the details of a credit account. (p. 7-52).

point of service (POS) plan A popular hybrid health insurance coverage. Usually has lower out-of-pocket expenses if you use the services of network providers. To go outside the network, you must first receive a referral from a network provider to receive coverage. (p. 9-15).

policy owner The person who makes the insurance premium payments. (p. 9-28).

Ponzi scheme A financial fraud that promises investors and savers a low-risk, high rate of return, interest, or dividends. (pp. 7-48, 8-84).

portfolio A grouping of investments, generally from a number of asset categories, into one place: a retirement plan, a brokerage account, or a mixture of mutual funds or exchange traded funds. (p. 8-56).

portfolio managers A team of professionals who manage the typical mutual fund. (p. 8-39).

power of attorney (POA) A legal document that allows a named person, often called an agent, to act on your behalf. (p. 10-40).

power of attorney for health care (also known as a **healthcare proxy**, a *surrogate,* or an *agent*) A legal document that ensures your wishes are known if you become injured or ill, but are not in a life-ending condition. (p. 10-39).

preapproved A lending term that describes when a lender has verified your credit, income, and other important facts and has indicated how much you are able to borrow for the purchase of a house. (p. 6-44).

preferred provider organization (PPO) A popular fee-for-service option. Offers reduced deductibles, copayment, and coinsurance when someone sees a medical provider who belongs to an insurance network. If services are obtained outside the network, reimbursement amounts decrease. (p. 9-14).

premium The cost of the insurance. (p. 9-6).

Premium Tax Credit A refundable credit available to taxpayers who purchase a health insurance plan through a qualified state or federal exchange and who do not have the option to purchase health insurance coverage through their employer or through a family member's health insurance policy. Designed to make health insurance more affordable. (pp. 3-42, 4-35).

prepaid card Money loaded onto a debit card in advance that can then be used to make payments in the future. (p. 5-14).

present-oriented A psychological time perspective based on either a *hedonistic perspective* (doing things for pleasure) or a *fatalistic perspective* (unable to visualize a meaningful future). (p. 1-27).

present value (PV) An estimate of the current value of a lump-sum amount and/or a series of payments given a known discount rate (or interest rate) and number of periods. (p. 2-12).

present value of a lump sum The value now of a given amount to be paid or received in the future, assuming compound interest. (p. 2-12).

present value of an annuity The value now of a series of future payments, discounted assuming compound interest. (p. 2-14).

pretax basis Contributions to savings accounts that lower taxable income; earnings grow tax-deferred. (p. 7-27).

primary mortgage insurance (PMI) An insurance policy that protects the lender. (p. 6-47).

principal The amount of money you borrow (the loan) that must be repaid. (pp. 2-3, 5-19, 7-28).

privately held stocks A firm where a relatively small number of people or family members own all of the company stock available. (p. 8-3).

probate The court-supervised process of distributing assets and paying debts after someone's death. (pp. 10-23, 10-32).

procrastination Placing more value on the present at the expense of the future. (p. 1-32).

progressive tax Applies higher tax rates to higher-income households. (p. 4-8).

projection The amount you *think* you will receive or spend in any given category of a budget. (p. 2-38).

property tax A tax imposed by a local municipality or state, which is based on the value of the property. (p. 4-5).

publicly traded stocks A corporation whose ownership is distributed among the general public. (p. 8-3).

Public Service Loan Forgiveness (PSLF) Program Allows any remaining student

loan balance to be forgiven after the borrower makes 120 (10 years) on-time payments while working for local, state, or federal government entities or for 501(c)3 not-for-profit organizations. (p. 6-21).

purchasing power risk (or **inflation risk**) The danger that rising prices in the economy will erode the purchasing power on interest earned on an investment. (p. 8-23).

pure risk Risk that results only in an economic loss, such as needing to repair a car or replace a major appliance. (p. 7-12).

pyramid scheme A scam that is typically based on selling products or recruiting new members into an organization. (p. 7-48).

Qualified Tuition Programs A tax-deferred education savings plan that allows tax-free distributions and also allows the money to be controlled so that it can only be used for college expenses. (p. 7-46).

qualifying children Dependents of a taxpayer; must pass four general tests: support, age, relationship, and abode. (p. 4-18).

qualifying distribution (from a Roth IRA) A dispersal from a Roth IRA after an account holder is 59½ years of age or older and the Roth IRA account has been open for at least 5 years. (p. 7-28).

qualifying relative A dependent who meets all of the following requirements: He or she is not a qualifying child of another person; his or her relationship to the taxpayer is that of child (as defined previously), parent, grandparent or direct ancestor, aunt, or uncle; the relative has less than $4,150 (in 2018) of gross taxable income; the taxpayer provides more than half the dependent's support. (p. 4-18).

rate of return (I) The amount you can earn on your money each year. (p. 2-12).

rating agency A company that analyzes corporations and governments regarding their ability to repay their debts. (p. 8-23).

real estate Land, buildings, and other structures permanently attached to the land. (p. 8-67).

real estate agent An individual who represents the buyer, the seller, or both when transacting home purchases. (p. 6-44).

real estate investment trusts (REITs) An investment that provides a way to add real estate to your investment portfolio at a relatively low cost. (p. 8-69).

realized gain The excess of cost basis over the proceeds of a sale. (p. 3-34).

realized income Income that is generated each time you convert one asset into a different one for a gain. (p. 4-48).

real rate of return Inflation-adjusted return. (p. 7-4).

recognized income When realized income is reported and taxed. (p. 4-48).

refundable tax credit A tax credit that reduces the amount of tax someone must pay. If the credit exceeds the tax liability, the difference can also be received directly by the taxpayer. (pp. 3-42, 4-33).

regional fund A type of mutual fund investment that owns investments in specific geographic areas, such as Europe or Asia. (p. 8-48).

regressive taxes Taxes that have a larger negative impact on low-income earners. (p. 4-8).

REIT index A type of professionally managed investment (similar to a mutual fund) that owns shares in other real estate investment trusts and mutual funds. (p. 8-70).

reletting fee A fee required by the landlord to cover the cost of renting the apartment again before the lease termination. (p. 6-37).

remainder beneficiary What attorneys call the ultimate beneficiary of a **trust**. (p. 10-24).

renter's insurance (sometimes called **tenant's insurance**) Similar to an HO policy except that it is designed to provide you with property replacement and liability coverage rather than insurance to replace your residence. (pp. 6-38, 9-49).

replacement coverage Insurance provision that ensures that you will get the full replacement cost of items lost. (p. 9-50).

repossessed A term used to describe when assets that were used to secure a loan are taken by the lender because the loan was unpaid. (p. 5-35).

required minimum distributions (RMDS) Obligatory withdrawals from a traditional IRA once you reach the age of 70½. (p. 10-8).

residential real estate Includes dwellings that are individually owned and where people live (e.g., houses, condominiums, duplexes). (p. 8-67).

residual clause A will provision that states how all remaining property should be distributed in case there is something left in an estate or property is disclaimed. (p. 10-31).

residual disability rider A disability insurance provision that allows you to receive a benefit if you return to work full-time but your income is not fully restored. For example, if you are a police officer and you return to work full-time as a security guard, the residual benefit will pay the difference between your prior salary and your new salary. (p. 9-26).

restricted endorsement A way to sign your check and ensure that it gets deposited into your account. (p. 5-4).

Retirement Savers Credit An additional $1,000 tax credit if you are older than 18 years of age, have an adjusted gross income of less than $30,000, and not a full-time student. (p. 10-12).

Retirement Savings Contribution Credit A nonrefundable tax credit of up to $1,000 for taxpayers with modest incomes who contribute up to $2,000 to their own retirement savings accounts. You can qualify if your income is *below* a certain amount and you contribute to an IRA or ROTH IRA, or you make voluntary contributions to an employer-sponsored retirement plan such as a 401(k), 403(b), or SIMPLE IRA plan. (p. 4-36).

retirement savings rate The percentage of your income that you are putting aside for retirement. (p. 10-6).

return The profit or loss on the sale of an asset. Can also refer to the rate of return needed to estimate a present or future value in a time value of money calculation. (pp. 7-3, 8-57).

return of premium Requires the insurance company to return all or a portion of your premiums if no claims are made for a specific period of time stated in the policy. (p. 9-25).

revocable living trust Allows the grantor (who is almost always the trustee) to do whatever he or she wants with trust assets while alive, including withdrawing all the assets out of the trust. At the time of the grantor's death, however, revocable living trusts become irrevocable. (p. 10-25).

revolving credit A loan that may be accessed, repaid, and used again indefinitely. (p. 5-35).

revolving loan Loan amount that can be withdrawn or repaid until expiration. (p. 5-41).

reward credit cards Credit cards that provide benefits linked to how much is purchased with the card. These benefits can include cash back, airline and hotel travel points, and other valuable benefits. (p. 5-43).

risk The uncertainty associated with any physical, social, emotional, environmental, labor market, or financial activity. (pp. 1-18, 7-3).

risk matrix A way to help classify and manage your health situation, as well as any other decision that entails personal or household risk. (p. 9-4).

risk perception Your cognitive evaluation of the potential gains and losses associated with a course of action. (p. 1-20).

risk preference Liking one risky choice over another risky choice. (p. 1-20).

risk-taking Doing something that involves the possibility of a gain and/or a loss. (p. 1-18).

risk tolerance A person's willingness to engage in behavior where the outcomes are both unknown and potentially negative. (p. 8-54).

Roth IRA An individual retirement savings account that, by definition, has two significant advantages: Investments held in the account accumulate earnings on a tax-deferred basis and money pulled from the account is tax-free if certain conditions are met. (pp. 4-50, 7-27, 10-15).

Rule of 72 Provides an estimate of how long it will take you to double your money, calculated by dividing 72 by the interest rate. (pp. 2-7, 7-3).

salary A form of earned income in which a person earns a predetermined amount regardless of the work load. (p. 3-11).

sales load A one-time commission paid to an investment salesperson either when a mutual fund is purchased or sold. (p. 8-33).

sales tax Imposed by state and local governments on the sale of certain goods and services. (p. 4-4).

savings Money set aside to fund financial goals. (p. 7-6).

savings account An interest-bearing asset that allows you, as the account owner, to earn a small return on your deposit. (p. 7-22).

savings deposit Money held in a bank or credit union savings account; a savings deposit is a form of loan. (p. 2-6).

savings ratio Indicates the percentage of income that you setting aside on a regular basis, as calculated by the following formula: Savings Ratio = Savings/Income. (pp. 2-41, 3-5).

scheduling the property Extra insurance coverage for expensive items like jewelry, art, antiques, and collectibles that would not be covered in a general policy because of their high values. The process of purchasing a personal property floater is the same as a homeowner's policy. You create a "schedule" of the items you want to insure. (p. 9-50).

secondary market A public marketplace (stock exchange) where buyers and sellers meet to trade securities and assets. (p. 8-5).

secured credit card A type of credit card that requires the borrower to deposit the full amount of the line of credit as collateral before the credit card is issued. (p. 5-46).

secured debt Money borrowed to buy things like cars and homes. These secured assets can be taken back by a lender if the debt is not repaid. (p. 5-35).

secured loan A loan backed by collateral. (p. 6-11).

Securities Investor Protection Corporation (SIPC) Insurance that protects your account up to $500,000 per customer, per firm, with up to a $250,000 limit for cash; covers you in the event that the brokerage firm goes out of business or experiences theft. (p. 8-62).

security deposit Money paid in advance to cover the cost of excess damage you might cause while living in the house or apartment. (p. 6-37).

self-directed brokerage account Allows you to make your own investment decisions. Firms like Charles Schwab®, TD Ameritrade®, and E*Trade® provide this option. (p. 8-62).

self-efficacy How well you believe you can do something. (p. 1-29).

self-employed Earnings from a business that you operate. (p. 3-18).

self-employment tax The combined tax rates for OASDI and HI (15.3%) paid by self-employed individuals: the employee's share of FICA taxes (6.2% OASDI and 1.45% HI for a total of 7.65%), plus the employer's share of the FICA taxes (6.2% OASDI and 1.45% HI for a total of 7.65%). (p. 4-43).

sell stop Instructs a brokerage firm to sell shares if the price falls. (p. 8-63).

service charge A reasonable monthly fee charged by any financial institution to use its services. (p. 5-5).

settlement The last step in the home buying process; the property is formally sold and transferred from the seller to the buyer and when all closing costs must be paid; also referred to as closing. (p. 6-46).

settlement costs See Closing costs. (p. 6-45).

shares See Stock. (p. 8-3).

short sale The process whereby a lender takes back the home and forgives any amount owed. The amount forgiven is usually considered taxable income. (pp. 6-47, 8-71).

short-term disability policy Replaces a portion of your salary for 3, 6, or 12 months. The longer the coverage period and the more income replaced, the higher the premium. (p. 9-23).

short-term goals Financial objectives that are expected to be funded in one year or less. (p. 1-24).

short-term liabilities Debts that should be repaid within one year. (p. 2-31).

signature loan An unsecured loan; no collateral is involved. (p. 6-11).

skilled nursing care Provides around-the-clock medical care, most often in a nursing home. (p. 9-54).

SMART goal A goal that is Specific, Measurable, Attainable, Relevant, and Timely. (p. 1-24).

social capital Personal and professional connections with other people. (p. 1-9).

soft inquiries Credit inquiries made by lenders to prescreen customers when making "preapproved" credit offers that are not initiated by the consumer. (p. 5-37).

sole proprietorship The default legal business structure of a self-employed individual; requires no legal registration or paperwork, and all income and expenses from business activities flow through to the individual's personal tax return. (p. 3-21).

special endorsement A way to transfer the amount of a check to someone else. (p. 5-4).

special perils HO policy Homeowner's insurance policy that will pay for any loss unless the peril is explicitly excluded from the policy. (p. 9-47).

split limit PAP A common type of personal automobile liability insurance in which the split limits describe the level of coverage in the policy. (p. 9-37).

spread The difference between what an asset or security sells for and what the same asset or security can be purchased for. (p. 8-76).

springing power of attorney (POA) Allows a person named by you in a legal document to come into effect ("spring into force") when some event happens, such as becoming incapacitated. You can determine whether your agent has limited or general powers. (p. 10-40).

standard deduction An amount set by Congress that adjusts gross income on a tax return. (p. 4-21).

standard deviation Tells you how far from the mean or average a potential return might be over time. (p. 8-57).

standard mileage rate The amount allowed by the IRS when calculating the tax deduction for miles driven associated with business, medical, moving, and charitable activities. (p. 4-52).

State Children's Health Insurance Provides free or low-cost insurance for children in working families. (p. 9-11).

statutory will A fill-in-the-blank form of a will. (p. 10-33).

status quo bias A personal preference for keeping things just like they currently are. (p. 1-34).

stepped-up basis Readjustment of an appreciated asset's value for tax purposes due to inheritance. (p. 3-36).

stock Represents your degree of ownership in a company; also referred to as **shares** or **equity**. (p. 8-3).

stockbrokers (also known as *investment representatives, registered representatives,* or *account managers*) Professionals who provide advice and other services to investors (see **full-service brokers**). (p. 8-62).

stock certificate Paper proof that an investor owns shares in a company. (p. 8-63).

stock exchange A place where buyers and sellers meet to trade stocks. (pp. 8-5, 8-10).

stock market A secondary market where buyers and sellers meet to trade stock. (p. 8-3).

stock prices The fair market value of a company's shares; stock prices move up or down as the anticipated profits of a company rise and fall. (p. 8-6).

stop order (sometimes known as a *stop-loss order*) Directs a brokerage firm to buy (or

sell) only when the price reaches a set point. (p. 8-63).

street name The requirement of most brokerage firms that the firm is shown as the owner of record, even though the brokerage account client actually owns the shares. (p. 8-64).

subjective risk Personally developed probabilities of potential losses based on expectations, fear, worry, and other factors; varies from one person to another. (pp. 3-29, 7-5).

subletting Allowing someone else, not originally on a lease, to live in the home and pay rent. (p. 6-37).

suitability standard of advice A requirement that brokers and agents provide advice and recommendations to customers that is suitable to the needs of the customers; this is a lower standard of care compared to the fiduciary standard. (p. 10-48).

Supplemental Nutrition Assistance Program (SNAP) Government program that provides money to low-income households to purchase food (also commonly referred to as food stamps). (p. 3-41).

supply and demand graph The fundamental building block of modern economics shows how prices increase when supply decreases and demand increases. (p. 8-77).

surplus The money left over after all expenses have been paid. (pp. 2-40, 3-3).

systematic risk The risk that the markets can go down; associated with the economic environment in general and which diversification *cannot* eliminate. (p. 8-30).

tangible investing The act of allocating household resources to the purchase of collectibles and other hard assets with the hope of future price appreciation. (p. 8-74).

target date mutual fund A special type of asset allocation fund managed based on an individual's expected year of retirement that adjusts the amount held in stocks, bonds, and cash over time. When you are younger, the fund holds more stock. As you age, the fund automatically reduces the amount held in stocks and increases holdings in bonds and cash. (pp. 8-35, 10-19).

targeted savings rate The savings ratio (Savings ÷ Income) applied over a specific time period. (p. 3-6).

taxable income The amount remaining after the standard or itemized deduction; taxable income is your tax base used to determine your income tax. (p. 4-22).

tax advisors Specialists who deal with the IRS and state tax issues. (p. 10-44).

tax avoidance The *legal*, systematic structuring of transactions to minimize taxes. Legal strategies to reduce the amount of taxes owed are often referred to as tax loopholes. (p. 4-48).

tax base The amount of money that will be taxed, generally the cost of the item you purchase. (p. 4-5).

tax bracket A predefined range of taxable income in which a single tax rate applies. (p. 4-25).

tax bracket tax rate The predetermined rate at which income or property is taxed. In the United States, tax rates are broken into different brackets, which represent the level of taxation due on income within a bracket. (p. 4-26).

tax credit A dollar-for-dollar reduction in an assessed tax liability. (p. 4-32).

tax deduction A dollar reduction in the amount of taxable income. (p. 10-13).

tax-deferred earnings Interest, dividends, and other unearned income generated on assets held in tax-deferred accounts; tax-deferred earnings are not currently taxable. (pp. 7-27, 10-8).

tax-deferred growth The tax strategy of letting assets appreciate in value over long periods of time before realizing the gains (*maximizing*). If you hold an investment for more than 1 year, any gain you receive on the sale will qualify for lower, long-term capital gains tax rates. Additionally, this strategy will allow you to only pay taxes on the gain one time. (p. 4-51).

tax-equivalent interest rate formula A calculation used to determine whether to buy municipal or fully taxable bonds: Equivalent Tax = Free Interest Rate = (Taxable Bond Interest Rate) × (1 – Marginal Tax Rate). (p. 8-22).

taxes Financial obligations imposed on individuals and businesses by government entities. (p. 4-3).

tax evasion The *fraudulent* misreporting of transactions (e.g., all income is not reported or fictitious deductions are reported) or the fraudulent structuring of transactions for the *sole purpose* of tax avoidance, without any other business or economic purpose. (p. 4-48).

tax-exempt interest Income not subject to federal income tax. (p. 8-22).

tax loopholes Legal strategies to reduce the amount of taxes owed. (p. 4-48).

tax rate Used to calculate the amount of tax owed and is generally denoted as a percentage rate, such as 7.5%. (p. 4-5).

tax return Information that a taxpayer compiles and reports to the IRS on a standardized form. (p. 4-13).

tax system A systematic and consistently applied method of determining how much tax an individual must pay to a government entity. (p. 4-7).

T-bills (or **Treasury bills**) Securities with a maturity date of 1 year or less. (p. 8-21).

telemarketing fraud When a product or service is misrepresented in an unsolicited phone call, e-mail, or text message. (p. 7-50).

Temporary Assistance for Needy Families (TANF) Government program that provides supplemental income to very-low-income unemployed households typically with children. (p. 3-41).

tenancy by the entirety A form of property ownership with a spouse. (p. 10-22).

tenancy in common A form of property ownership with one or more other people; the ownership interest does not need to be equal. (p. 10-22).

tenant's insurance (sometimes called **renter's insurance**) Similar to an HO policy except that a tenant's policy is designed to provide you with property replacement and liability coverage rather than insurance to replace your residence. (p. 9-49).

term-life insurance (also known as **pure term insurance**) Provides a death benefit only if the insured individual dies before reaching a predetermined age. (p. 9-29).

testamentary trust An irrevocable trust that is established at death through a will. (pp. 10-24, 10-25).

testate To die with a will. (p. 10-30).

testator A person who makes a will. (p. 10-30).

time value of money (TVM) Formulas and calculations that allow you to specifically consider financial goals in terms of money, time, and interest. (p. 2-11).

title Proof of property ownership, whether a house or a mutual fund. (pp. 10-22, 10-29).

title insurance Protects either the lender or borrower in case someone says they have a claim on the property after you've purchased it. (p. 6-45).

total debt-to-income ratio Indicates what percentage of your income you are using to pay all of your debts. The ratio is calculated as follows: Total Debt-to-Income Ratio = (Total Required Debt Payments ÷ Gross income) × 100. (pp. 2-41, 3-7).

total fixed payments-to-income ratio The sum of the monthly housing payments plus all other monthly debt payments divided by total monthly income. (p. 6-43).

total income The combination of earned and unearned income. (p. 3-25).

total risk The combination of systematic and unsystematic risk. (p. 8-30).

traditional IRA An investment account that allows someone to save for retirement on a tax-deferred basis; depending on the account owner's income and access to retirement plans, contributions to a traditional IRA may be tax-deductible. (pp. 7-29, 10-13).

transfer on death (TOD) A way to title securities so that upon your death, the securities automatically, by law, transfer to named beneficiaries. (pp. 10-22, 10-29).

travel and entertainment cards Credit cards that typically require cardholders to pay off their balance on a monthly basis, such as American Express® and Carte Blanche®. (p. 5-43).

traveler's check A prepaid check purchased from a credit card company, bank, or credit union that must be signed before it can be cashed. (p. 5-4).

Treasury bills (or **T-bills**) U.S. Treasury-issued securities with a maturity date of one year or less. (p. 8-21).

Treasury bonds U.S. Treasury-issued bonds that have a maturity date between 10 and 30 years from the date of issuance and make semiannual coupon payments. (p. 8-22).

Treasury notes U.S. Treasury-issued fixed-income investments that have a maturity date between 1 and 10 years and make semiannual coupon payments. (p. 8-22).

trust A legal entity that holds property and assets for someone or some group. (p. 10-24).

trustee The person or organization (such as a bank) that will manage trust assets and authorize distributions from the trust based on the instructions given by the grantor. You may be the **grantor**, **beneficiary**, and **trustee** of your own trust. (p. 10-24).

trustee-to-trustee transfer The act of moving assets from a retirement plan to an IRA, or an IRA to a new IRA, without taking physical possession of the money held in the account. (p. 10-17).

umbrella policy (also called **excess liability coverage**) An insurance policy that provides additional liability coverage beyond what is stated in a homeowner's, renter's, or personal automobile policy. (p. 9-49).

unbanked (underbanked) A term used to describe those who do not use the services of a bank or credit union. (p. 6-3).

underinsured Driving a car with insufficient coverage to pay the claims associated with an accident. (p. 9-39).

underwater The state of owing more on a mortgage than the current fair market value of a house, generally a short-term problem. If homeowners continue living in their home for an extended period of time, their house values will generally increase again over time, and they will continue to pay down the balance of their mortgage. (p. 8-71).

underwriter A firm such as an investment bank, that helps other companies raise money. (p. 8-3).

unearned income Money you receive from sources other than work or labor; also from financial capital, such as investments. (p. 3-25).

unemployment benefits Cash payments from the government made to individuals who have recently lost their jobs due to no fault of their own. (p. 3-39).

Uniform Gifts to Minors Act (UGMA) A way to title property so that an asset can be owned by a minor; UGMAs are used for bank accounts, investments, and insurance policies. (p. 7-42).

Uniform Transfers to Minors Act (UTMA) A way to title property so that an asset can be owned by a minor; UTMAs can be used to hold any type of property, including real estate. (pp. 7-42, 7-43).

uninsured/underinsured motorist coverage Additional coverage that pays your medical and property damage expenses above what someone else's policy pays. (p. 9-40).

universal life insurance Pays a higher return than whole life insurance on the cash value portion of your policy. You also get the ability to skip premiums in the future and to adjust the face value of the policy. (p. 9-30).

unlimited liability Having total responsibility for the losses associated with a negative event; most often associated with owning a business as a sole proprietor. (p. 3-21).

unsecured debt Money borrowed to purchase goods and services that are generally consumed quickly, such as using your credit card to buy groceries. (p. 5-35).

unsecured loans Sometimes called **signature loans** because there is no collateral involved in the lending process. They are considered to be riskier than secured loans. As such, the interest rate on an unsecured loan will be higher. (p. 6-11).

unsystematic risk Risk that can be eliminated through diversification. (p. 8-30).

U.S. debt The amount of money the United States has borrowed and must repay. Total U.S. federal debt is approximately $20 trillion. (p. 4-8).

use assets Assets that tend to go down in value; intended to support the current level of living of an individual or household; also referred to as **depreciation**. (pp. 6-25, 8-68).

U.S. savings bond A way for nearly all Americans to lend money to the U.S. government. Unlike U.S. Treasury bills and notes that require thousands of dollars to make an investment, U.S. savings bonds can be purchased for as little as $25. (p. 7-35).

value The combination of the price paid and the quality of the item purchased. (p. 6-25).

value-oriented investors Investors who look for underpriced stocks or bargains. (p. 8-31).

variable installment loans Loans in which debt repayments can fluctuate from one period to another. (p. 5-23).

variable life insurance A type of life insurance policy in which the cash value in the policy can be invested in mutual funds. (p. 9-30).

variable universal life insurance Combines the best of variable and universal policies. This type of policy allows you to invest in more risky investment products and have the ability to skip future premium payments if the cash balance in the account is sufficiently large enough. (p. 9-30).

visualization A technique to imagine what the future will look like in real terms. (p. 7-19).

volatility The value of an asset fluctuating up and down or the variability of returns over time. (pp. 7-3, 8-57).

wage What an employer will pay an employee to complete a task. Almost always, wages are based on an hourly rate. (p. 3-11).

wage replacement rate Percentage, usually between 70% and 80%, which represents a constant standard of living between pre- and postretirement. (p. 10-4).

waiver of premium provision Allows you to stop paying premiums if you are disabled longer than a specific period of time, usually 90 days. (p. 9-26).

whole life insurance A type of life insurance policy in which the cash value in the policy earns a fixed rate of return. (p. 9-30).

will A legal document that dictates someone's desires regarding the distribution of property after death. (p. 10-30).

withholdings Money taken out of an employee's pay by the employer; some withholdings are mandated by law, and other withholdings are elected by employees. Can include federal and state income taxes and payroll taxes, as well as employee benefits and charitable contributions. (p. 4-3).

workers' compensation Insurance policy that provides benefits when you are injured or become ill as the result of work. (p. 9-26).

writing a bad check The process of writing a check for an amount greater than the balance in a bank or credit union account; also known as **non-sufficient funds.** (p. 5-5).

zero coupon bond A type of fixed-income security that does not make regular interest payments. (p. 8-22).

Index

F

G

J

K

L

Q

R

WILEY END USER LICENSE AGREEMENT